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ABSTRACT

This document is a policy paper that addresses the recommendations for project and staff development made in California's 1989 Strategic Plan for Adult Education. Following an executive summary, chapter 1 summarizes the objectives and history of the strategic plan. Chapter 2 describes the relationship between the recommendations and the curriculum, covering: legal requirements, competency-based adult education, current Department of Education guidelines, project curriculum work, contributions of local agencies, future needs assessments, and the development of software appropriate for adults. Educational technology's potential impact on staff development is the subject of chapter 3. Chapter 4 provides information on staff development, including background, descriptions of federal projects in California, and other considerations. Chapter 5 explains proposals on staff development, curriculum, and educational technology and states priorities for a feasibility study. Chapter 6 briefly summarizes the earlier chapters. The appendices discuss exemplary adult education programs and selected grant projects at California community colleges. They also provide a glossary of computer and educational technology terms, a software review form, a case study, a self-study guide for adult basic education staff development, and a list of California's federally sponsored adult education projects. Three pages of references are provided. (CML)

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PROGRAM AND STAFF DEVELOPMENT SUPPORT

Working Paper on Strategic Recommendation 9

Advisory Review Draft
August 22, 1990

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Program and Staff Development Support

Working Paper on Strategic Recommendation 9

Advisory Review Draft
August 22, 1990

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Letter of Transmittal

Program and Staff Development Support is one of fourteen recommendations set forth in ***Adult Education for the 21st Century: Strategic Plan to Meet California's Long-Term Adult Education Needs.***

The primary goal of this working paper is to examine those components of the educational program that most directly impact the instructor and the educational setting—curriculum and staff development. Meaningful curriculum and skilled instructors are the keys to quality programs for California's adult education students. Special attention is paid to the role of technology in the improvement of curriculum and staff training.

Broad field involvement in the discussions on the recommendation is solicited. Subcommittee members of the Interim Steering Committee and the leadership of the professional organizations of the community college noncredit and public school adult education programs are encouraged to facilitate input from the field. Written comments are invited.

This paper is a working document. It does not necessarily represent the views of the California Department of Education, the California Community College Chancellor's Office, or the Interim Steering Committee. Any further development of the proposals submitted in this paper will be as a result of field review, recommendation of the Interim Steering Committee, and approval of the State Superintendent of Public Instruction and the Chancellor.

Sincerely,

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This paper has been prepared to summarize background information and outline possible policy decisions. The contents of this paper do not necessarily reflect the policies of the State Department of Education, Interim Adult Education Steering Committee, or other institutions.

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Executive Summary

The quantity and quality of support provided for the instructor determines the quality of instruction. The quality of instruction determines the success of an educational program.

Adult Education for the 21st Century, a strategic plan for California adult education, was developed in 1988-89 under the auspices of an Adult Education Advisory Committee.

This paper addresses one of 14 recommendations developed in that report: **Program and Staff Development Support**. The intent of this recommendation is to give the classroom instructor the auxiliary resources that are needed to deliver a quality instructional program.

Introduction and Overview

The heart of any school, its purpose for existence, is its instructional program. However, an instructional program is more than "instruction." Instruct whom? Instruct what? Instruct how?

The "whom" is the adult learner. The "what" is curriculum, the content of instruction. The "how" is technique. One technique not yet in the repertoire of many adult education instructors is the use of computers and other emerging technologies. Thus bridging both the "what" and the "how" of instruction, a chapter of the paper will be devoted to educational technology. Staff development supports all segments of instruction: the who, what, and how.

This paper contains chapters giving background information on *Curriculum*, *Educational Technology* and *Staff Development*, followed by *Proposals for Action* and *Conclusions and Future Action*.

Curriculum

Current curricula are framed by statutory requirements, state-sponsored curriculum projects and policy decisions.

Minimum diploma requirements are designated. Legislation specifies the ten program areas in adult education that receive state funding in both public school adult classes and community college noncredit divisions.

The Adult Performance Level (APL) study published in 1975 took a new approach to defining adult literacy. The study showed that one out of five adults functioned with difficulty in today's society. Replications of the APL study confirmed its applicability to California. These studies provided the foundation for California's Competency Based Adult Education (CBAE) programs. As a result California funded three major life skill based curriculum projects focused on integrating basic and life skill instruction, so that basic skills could be applied to the tasks of independent adult living. The projects targeted Adult Basic Education (ABE), Vocational English as a Second Language (VESL) and a high school diploma curriculum.

In 1982 Adult Education Unit leaders made the far-reaching decision that implementation of a CBAE program would be a requirement for local agencies applying for the federal supplemental grants. Along with the mandate came support projects in assessment, staff development and dissemination that facilitated implementation at the local level. State efforts in the 1980's were dominated by CBAE implementation.

More recently the Adult Education Unit has initiated the development of curriculum frameworks for the authorized areas of instruction. High school subject frameworks are completed. Priority now goes to the completion of frameworks for English as a Second Language (ESL) and Adult Basic Education (ABE).

Local programs are a rich source for curriculum development. The wealth of materials that has emerged from local agencies is staggering. That work was accelerated during the eighties, which hosted three major social policy initiatives that had tremendous impact on adult school curriculum:

- *Refugee Policy.* There is a big difference in the approach taken and the materials used with a student from Central or South America with three years of primary schooling and the refugee from a culture with either no written language or a language utilizing a non-Roman alphabet. For the first time many districts were establishing and developing curriculum for literacy and pre-literacy levels of ESL.

- *Job Training Initiatives.* The impact of the Job Training Partnership Act (JTPA) and Greater Avenues for Independence (GAIN) on adult education curriculum is that the adult basic education (ABE) classroom has become the vehicle of choice to provide the prevocational remediation that many participants need. The result of this is a greater emphasis on prevocational skills in the curriculum.

- *Immigration Reform and Control Act.* This amnesty program contained specific educational requirements for undocumented persons seeking status leading to legal residency. Because of the low educational level of the amnesty applicants, new citizenship curriculum had to be developed for pre-literacy and beginning levels of English as a Second Language.

There has been no recent comprehensive survey of local agencies to assess needs in the area of curriculum. This should be done. Among the areas likely to be identified as needing attention are higher order thinking skills, workforce literacy, and instructional materials to enhance the self-esteem of adult education's multi-cultural student population.

Without doubt, the decade of the 1990's will be dominated by the acquisition and integration of educational technology into the curriculum. A major problem is there is too little software appropriate for adults in this age of computer-assisted or computer-based instruction. Other technologies, barely tapped to date, will change the instructional environment by bringing greater resources to the teacher, enrichment of student materials and new modes of instructional delivery.

Educational Technology

Utilization of technology in adult education classrooms is still at a lower level of implementation than in the youth programs. Classroom use of the computer is growing at a rapid pace. Use of the laserdisc, interactive video, and multi-media presentations is still rare. It is difficult to track rates of technology usage in education. The studies that have been done focused on classrooms for youth or higher education. There are no accurate profiles of technology usage for adult education.

Instruction remains the focus of classroom activity. With all of the attention being directed to educational technology now, one may need to be reminded that for most students the technology itself is not the object of instruction—rather it is a means to an end. Machine-based learning activities can be supplemental to other instruction or they can become the primary means of delivery. Whatever equipment is being used, technology does not and cannot replace the human touch. It is one more tool in the hands of the instructor, albeit one that delights, expands horizons, challenges and frustrates.

Technology's role is not limited to instruction. Computers can also provide unprecedented support to the individual instructor by storing and sorting information, managing student records, allowing electronic communication with other educators across the stat, and providing interactive multimedia demonstration of instructional techniques.

Technology's potential role in education cannot be reached until staff is trained in its multiple applications. There is tremendous need for that training. A recent California *Survey of Educational Technology* revealed 38.3 percent of California instructors ranking themselves as unskilled in computer competency and another 30.7 percent reporting limited proficiency. Training involves both use of equipment plus time to become thoroughly familiar with the content of the software so that it can be assigned effectively for specific purposes. There is even less expertise in other technologies.

California's *Educational Technology Act* calls for a state master plan for educational technology. However, there is no representative from adult or noncredit education on the commission developing that plan. Adult educators need to monitor their work and educate the members to the needs of adult education programs.

The first steps toward coordinating technological planning and implementation for adult education are found in the newly established Outreach and Technical Assistance Network (OTAN). They will serve as the bellringer for coaxing, pushing, leading California's adult education agencies into the technological 21st century. The project director has

emphasized that technology must be demystified for instructors. Real change will not occur in the educational setting until this takes place. However, currently OTAN has neither the charge nor the resources to single-handedly bring the adult education system to an acceptable level of technological expertise.

Increasing use of technology will accelerate the changing role of the instructor and the learning environment. Current activities within the classroom include the orchestration of small group lessons, cooperative learning activities, computer assisted instruction and matching aides or volunteers to those needing one-on-one instruction. Add distance learning via modem-liked computers and the use of interactive laserdiscs for applied performance assessment to these activities and classroom management becomes even more of an art.

Rapid growth and recent implementation "*. . . raises a problem in assessing effectiveness of technology . . . Identification of strengths, weaknesses, and effectiveness can only be conducted in a very general way.*"[1] A comprehensive evaluation of the instructional and cost effectiveness of the various educational technologies for adult education is needed.

Staff Development

"*The typical practicing adult educator is new to the position, has little or no course work in adult education, comes from a field outside of adult education, is likely to leave it in five years, and works very hard.*"[2]

There is a recognized body of professional literature on effective staff development. Effective staff development programs include collaborative planning, agency policies that motivate participation, training over time, a variety of delivery styles and options, and evaluation components. Awareness/presentation, demonstration, practice with feedback and application with coaching are the basic steps involved in acquiring new techniques. It is the last step, application with coaching, that moves staff development effectiveness from the 20 to the 80 percent range.

There is dramatic need for continuous, organized methods of delivering teacher training to California's adult educators. Numbers provide the evidence. The Adult Education Unit has for years used the estimate of a one third annual turnover among the state's adult education instructors. One third of the part-time staff in public school adult education in 1988–89 was 5,280. Two thirds (needing technological training) would be 10,560. Those numbers would increase with the addition of part-time instructors from the noncredit divisions of the community colleges.

There is no information available on the number of non-certificated personnel in adult education. These support staff and volunteers are critical components of the system. Their training and inservice activities can make

[1] Micro Methods, *Using Educational Technology to Overcome the Adult Basic Skills Gap: California's Experience and Prospects*, Berkeley, December 1989, page 14.

[2] M. Hartman, "Some Surprises Found in National Survey of Adult Educators," *The Learning Connection*, 1983–84, page 4, as cited by Michael Galbraith and Bonnie Zelenak, "The Education of Adult and Continuing Education Practitioners," *Handbook of Adult and Continuing Education*, Jossey-Bass, San Francisco, 1989, page 125.

the difference between the run of the mill program and the highly successful one.

There are currently six projects that deliver staff development to California's adult educators. CASAS gives training in use of the assessment system. Leadership Training and the Executive Development Program address the needs of administrators. The ESL and ABE Teacher Institutes and the Outreach and Technical Assistance Network target instruction.

Technology offers potential for increasing quality and quantity of staff development opportunities through such capabilities as interactive teacher training via laserdisc and by accessing resources electronically.

Adequate financial resources and times accessible to all staff members (classes are in session mornings, afternoons, and nights) are obstacles to sustained inservice activities. Both K–12 and community college systems provide means for released time for staff development. Public school adult education needs similar provisions.

High attrition and the need for training new staff require disproportionate share of staff development resources. A core of full-time professional staff in adult education agencies could reduce attrition, improve curriculum and staff development at the local level, and free state professional growth resources to address a broader range of goals.

Training challenges for the 1990's include increased attention to literacy instruction and the need to bring adult educators into the realm of technological expertise.

Proposals for Actions

Seventeen proposals to enhance support for the instructional program are put forth for consideration (see Exhibit 1). They are presented within the major topics of this paper. There is an eighteenth proposal suggesting priorities. The categories are:

- Staff Development
- Curriculum
- Educational Technology
- Priorities for Feasibility Study

Grouped by primary topic, they are overlapping in nature. For example, local technology plans address both curriculum and staff training; software development is also a curriculum issue.

Many of the proposals involve technology. Not because technology is the magic answer to all deficiencies. It is not. It is important not to expect technology to solve all of the system's problems. Rather, the reason for the inclusion of technology in so many of these proposals is that no statewide resources have been allocated to it in the past. In contrast, both curriculum and staff development have been the attention of previous state-sponsored initiatives.

Exhibit 1

OUTLINE OF PROPOSALS

STAFF DEVELOPMENT

(1) **Staff Development Projects**
(2) **Full-time Staff**
(3) **Professional Development Days**
(4) **Advanced Staff Developers**
(5) **Staff Development Fund**
(6) **Public-Private Collaboration to Enhance Staff Development**

CURRICULUM

(7) **Adult Education Survey**
(8) **Curriculum Frameworks**
(9) **Teacher/Counselor Grants for Innovation**

EDUCATIONAL TECHNOLOGY

(10) **Local Technology Plans**
(11) **Technology Teacher Training Academy**
(12) **Software Development**
(13) **Educational Technology Act**
(14) **Evaluation of Educational Technology**
(15) **Model Adult School for the 21st Century**
(16) **Technical Support System**
(17) **Television Broadcast Capabilities**

PRIORITIES FOR FEASIBILITY STUDY

(18) **Priorities for Feasibility Study**

Instructional and support personnel remain the primary resource in the delivery of educational services. The attention given to their training and sustained professional growth opportunities directly impacts the quality of instruction that students receive. Six proposals are presented that are designed to ensure sustained, high quality staff training:

(1) *Staff Development Projects.* Continue and expand the staff development opportunities provided through current and new projects.

(2) *Full-time Staff.* Establish a core of full-time professional staff within adult schools and community college noncredit divisions to reduce attrition, improve curriculum and staff development at the local level, and free state professional growth resources to address a broader range of goals.

(3) *Professional Development Days.* Seek legislative authority to provide released time to public school adult education staff for professional development activities without loss of ADA to the local agency.

(4) *Advanced Staff Developers.* Reinstate advanced staff development training through the OTAN sites to provide a core of trainers for regional and local inservice.

(5) *Staff Development Fund.* Seek legislative authorization for the establishment of a Staff Development Fund, within adult education appropriations, to institutionalize the delivery of proven staff development practices and products.

(6) *Public-Private Collaboration to Enhance Staff Development.* Encourage public-private sector temporary assignments to provide technical support for adult education projects or local agencies.

Three of the proposals directly address curriculum. They are offered with the intent of providing means to keep instructional content current and relevant to rapidly changing social conditions.

(7) *Adult Education Survey.* Conduct surveys of local agencies to ensure a current appraisal of specific needs and accurate data in curriculum, staff development, technology and other concerns that may emerge.

(8) *Curriculum Frameworks.* Accelerate the completion of the curriculum frameworks for each of the state-funded areas of instruction, with priority given to ABE and ESL.

(9) *Teacher/Counselor Grants.* Twenty percent of any allocation for **Strategic Recommendation 12, Grants to Test Program Innovation** should be set aside for grants to individual teachers and counselors.

The eight proposals developed for educational technology are evidence of the major role technology will play in adult education in the 21st century.

(10) *Local Technology Plans.* The Outreach and Technical Assistance Network (**OTAN**) should assist local agencies in the development of educational technology plans for coordinating the acquisition and implementation of educational technology.

(11) *Technology Teacher Training Academy.* Broaden the scope of the Outreach and Technical Assistance Network (**OTAN**) to include the establishment of a Technology Teacher Training Academy.

(12) *Software Development.* Coordinated efforts should be made to establish working relationships and contracts with software developers to ensure products appropriate for adults.

(13) *Educational Technology Act.* Seek inclusion of adult education in the provisions of the *Educational Technology Act*

(14) *Evaluation of Educational Technology.* Design and conduct, or coordinate with other projects, ongoing evaluations of the instructional and cost effectiveness of

the various educational technologies for adult education students.

(15) *Model Adult School.* Establish Model Adult Schools for the 21st Century to serve as demonstration, experimental, training and evaluation sites for adult education.

(16) *Technical Support System.* New technologies should be applied to improve the delivery of technical support services to the field, including an electronic communication system, an 800 phone number, an electronic resource library, electronic primers for new instructors, and expert systems software for problem solving.

(17) *Television Broadcasting Capabilities for Adult Education.* Seek broadcast outlets and funding to use television for instruction and staff development.

The feasibility study, the next step in the development of this strategic recommendation, will need to target those proposals with the highest priority or those with the greatest likelihood of reaching implementation without undue delay.

(18) *Priorities For Feasibility Study.* Proposals in Category I should be given priority and proceed to the feasibility phase of the developmental work on ***Program and Staff Development Support.***

Category I Proposals include:

(1) Staff Development Projects
(7) Adult Education Survey
(8) Curriculum Frameworks
(10) Local Technology Plans
(11) Technology Teacher Training Academy
(14) Evaluation of Educational technology
(16) Technical Support System

Of these Category I proposals, three (numbers 3, 7 and 14) address planning and evaluation, essential first steps to ensure success of new initiatives. For that reason, it is likely that their designation as top priority will prevail through field review and discussion. However, the suggested ranking of the proposals for early feasibility studies is advisory only. Final ranking will be determined following field review.

Conclusions and Future Actions

Proposals contained in this report present opportunities and challenges to significantly impact adult education curriculum and delivery of staff development. A majority of these proposals can be implemented within two to four years if they receive the requisite support. Nevertheless, obstacles should not be minimized, even on those that are feasible within that time frame. The proposals on technology, both acquisition and

training, are expensive. Funding to implement them in a coordinated manner needs to be secured.

Other recommendations will take longer to develop and may, indeed, change as emerging technologies become readily available and affordable. For example, a reduction in costs of existing technologies and developmental efforts underway for several modes of transmission of video, audio, text and graphics may redirect thinking on both dissemination of resources and the vehicle of choice for distance learning. Flexibility must remain the key as adult educations build their technological infrastructure.

This working paper is being submitted for field review, discussion, and direction for further action. Priorities incorporating desirability, likely feasibility, near-term efforts and long-range goals must be set as a part of that process. Those priorities need to address not only the proposals within this paper but also those that are being developed for other strategic recommendations. Written comment is invited.

After initial review recommendations will be refined and feasibility assessed. All work is subject to the approval of the State Superintendent of Public Instruction and the Chancellor of the California Community Colleges.

Chapter 1
Introduction and Overview

The quantity and quality of support provided for the instructor determines the quality of instruction. The quality of instruction determines the success of an educational program.

A Strategic Plan for California adult education[1] was developed in 1988–89 under the auspices of an Adult Education Advisory Committee. The plan contains fourteen specific recommendations to improve the state's adult education programs. As a result of the plan, the Adult Education Institute for Research and Planning (AEI), operating under the governance of a field based steering committee, was established with the initial task of facilitating the implementation of the plan.[2]

This paper addresses one of those recommendations: **Program and Staff Development Support**. The recommendation will go through three stages of development and field review.[3] This option paper gives background and summarizes a number of models. A list of proposals emerges to address the different components of program and staff development. Some of the proposals are already in effect; the paper confirms the need for their continuance. Other proposals are new. Where consensus is reached following field review, selected proposals will be further refined in a feasibility study. After additional field review, implementation plans will be developed.

1.1 Overview of Recommendation

The heart of any school, its purpose for existence, is its instructional program. However, an instructional program is

[1] Adult Education Advisory Committee, ***Adult Education for the 21st Century: Strategic Plan to Meet California's Long-Term Adult Education Needs***, California State Department of Education, 1989 Edition.

[2] Pacific Management and Research Associates, ***Adult Education Institute for Research and Planning: Workplan for Implementation Research on the 1989 Strategic Plan for Adult Education***, prepared for the Adult Education Unit, California State Department of Education, February 1990.

[3] Adult Education Institute for Research and Planning, ***Guidelines for Working Papers on Strategic Recommendations: Workplan for Preparation of Policy Option Papers, Feasibility Studies and Implementation Plans***, prepared for the Adult Education Unit, California State Department of Education, December 1989.

more than "instruction." Instruct whom? Instruct what? Instruct how?

The "whom" is the adult learner. Although an understanding of the adult learner is basic to a successful adult education program, neither specific principles of adult learning nor characteristics of California's adult education population are within the scope of this paper.[4]

The "what" is curriculum, the content of instruction. One chapter of this paper will address curriculum: past efforts, current status, and future directions.

No new curriculum, teaching technique, nor policy initiative can be implemented successfully without carefully targeted, well planned staff training.

The "how" is technique. A good instructor has many techniques mastered. Some techniques are more effective than others for specific students or for communicating a specific concept. However, one technique not yet in the repertoire of many adult education instructors is the use of computers and other emerging technologies. Due to the tremendous impact and potential for change that such technology holds for adult education, it calls for special attention.

In addition to broadening the instructional techniques available to the teacher, technology can provide vast resources in support of curriculum. Thus bridging both the "what" and the "how" of instruction, a chapter of the paper will be devoted to educational technology.

Staff development supports all segments of instruction: the who, what, and how. No new curriculum, teaching technique, nor policy initiative can be implemented successfully without carefully targeted, well planned staff training. Thus staff development forms the third major focus of this paper.

This paper, then, reviews options to implement the Strategic Plan's recommendation on support for program and staff development. It covers:

- Curriculum
- Educational Technology
- Staff Development
- Recommendations
- Conclusions and Future Action

Prior to an exploration of the categories introduced above, it is appropriate to review the recommendation itself. The balance of this chapter addresses a summary of the

[4] The need for incorporating the principles of adult learning in teacher preparation is addressed in the policy option paper on Recommendation 10, ***Teacher Certification Appropriate to Adult Education***. Student characteristics are described in ***Adult Education Needs for a Changing State***, Pacific Management and Research Associates, Sacramento, November 1988.

recommendation, followed by the history of its development. Third, the objectives of the recommendation will be identified.

This background provides the framework for reviewing the status and examining the options on program and staff development support that are contained in the balance of the paper.

.2

Summary of Recommendation

Recommendation 9 and the accompanying discussion are reprinted from page 78 of ***Adult Education for the 21st Century: Strategic Plan to Meet California's Long-term Adult Education Needs.***

PROGRAM AND STAFF DEVELOPMENT SUPPORT

This plan proposes a vigorous State-led effort to provide technical assistance and program support to teachers, administrators and counselors.

A more systematic and comprehensive effort is needed to provide program and staff development support. The teacher of the future will need better curricula, knowledge of modern instructional methods and educational technologies, sensitivity to individuals from different ethnic and cultural backgrounds, understanding of evaluation, and feedback on his or her own performance. In addition, ways must be found to attract and retain the best teachers in the profession. If the current attrition of one-third of adult school teachers continues unabated, adult education will have difficulty in meeting quality needs of the future. Finally, ways must be found to train and assist new teachers who must "tool-up" rapidly for swiftly changing adult education programs or fill vacancies resulting from high turnover rates.

This plan proposes a vigorous State-led effort to provide technical assistance and program support to teachers, administrators and counselors. Top curriculum experts, including those from local districts who might take sabbaticals from their districts to work with the State, would develop curricula that are tailored to the needs of individual learning styles and cultural backgrounds and that will help teachers harness the technologies and learning resources of the future. Technical assistance and dissemination will be provided to help teachers use these curricula and assess student learning using their own and standard performance measures. State-of-the art technology will be used to provide a computerized clearinghouse and expert system software to provide teachers and administrators with easy access to information about model programs, educational advisors, teaching resources, and instructional techniques appropriate to diverse situations.

Curriculum development services should include:

- Selection and use of instructional technology.
- Dissemination of model curriculum and context relevant instructional techniques.
- Integration of instruction with Standard Performance Measures.
- Incorporation of qualitative goals such as enhancement of student motivation and self-esteem.

Staff development should include pre- and in-service programs dealing with:

- Preparation of educator to use alternative instructional methods and educational technologies.
- Preparation of educators to deal with students of different cultures and backgrounds.
- Preparation of educators to interact effectively with business and other community agencies to orchestrate learning resources to meet multiple needs.
- Clearinghouse and technical assistance services.
- Development of common professional terms and concepts.
- Assistance in using computers to retrieve and disseminate information about model programs and techniques cross-referenced by related problems.
- Resources to assist new teachers rapidly gain needed skills.

Program review and planning services should include:

- Preparation of "Adult Education Report Cards" for the Superintendent, Governor and Legislature.
- Collection and analysis of data on local state program performance and costs.
- Assessment and certification of teachers.

The delivery system for these services would incorporate a feedback system to help teachers and administrators find out what is working in their district, and to help state officials monitor overall performance.

California has carefully targeted. . . discretionary funds to provide coordinated program support to the agencies participating in this supplemental federal program. . . This recommendation . . . emphasizes the need for an increased level of program and staff development activities to keep pace with an ever changing field.

Strategic Recommendation 9

PROGRAM AND STAFF DEVELOPMENT SUPPORT

Sustain and modernize state-administered services to assist instructors and local providers in curriculum development, staff training, and program review. These services should provide:

- Workshops, conferences, newsletters and regional technical assistance.
- Toll-free technical assistance number.
- Modem-linked computer bulletin boards with capacity to down load information and software.
- Expert systems software (*e.g.* interactive learning and counseling programs).
- Video tapes and TV courses for adult educators.

These services should have follow-up mechanisms to guide program development with participant feedback.

Although appearing in the original text of the discussion of this strategic recommendation, the items listed under "Program Review and Planning Services" will not be covered in this paper. These subjects are incorporated in three other strategic recommendations. School report cards are developed from the accountability measures which are a part of Recommendation 7, **Quality Standards and Performance Measures**. Collection and analysis of data are covered in Recommendation 8, **Integrated Adult Education Data System**. Recommendation 10 is **Teacher Certification Appropriate to Adult Education**.

1.3 History of Recommendation

Discretionary funds for adult education program improvement are available to California adult education through the federal *Adult Education Act*. From its inception a portion of the funds that have been distributed to the states was earmarked for teacher training, research, demonstration, dissemination, or evaluation projects. Through its **State Plan**, California has carefully targeted those discretionary funds to

provide coordinated program support to the agencies participating in this supplemental federal program. Emphasis shifted from curriculum development in the 1970's to assessment and staff development in the 1980's.

These ongoing efforts were recognized by the 1988–1989 Adult Education Advisory Committee as essential components in maintaining strong local programs. This recommendation does not reflect criticism of past efforts. Rather it validates those accomplishments and emphasizes the need for an increased level of program and staff development activities to keep pace with an ever changing field.

1.4 Objectives of Recommendation

The intent of Recommendation 9, **Program and Staff Development Support,** is to give the instructor and nonclassroom personnel the resources that are needed to deliver a quality instructional program (**See Exhibit 1.1**).

Exhibit 1.1
OBJECTIVES OF RECOMMENDATIONS

- Maintain current resources.
- Develop resources in response to need.
- Maximize use of technology to improve delivery of resources.
- Encourage use of technology in instructional techniques.
- Improve practitioner skills.
- Provide follow-up and technical assistance.

The objectives listed above address both human and material support.[5] They are all related to the Strategic Plan's long-term planning theme, "Improve Quality and Responsiveness of Program."

[5] "Current resources" refers to the training and technical assistance provided by special projects in staff development, assessment, and research/planning.

Chapter 2
Curriculum

Curriculum is not static. It changes constantly as student populations and the needs of society change. That rate of change will accelerate as educational technology increasingly impacts the instructional environment.

Curriculum is the core of program development. It is the course of study of a school, the content of a class. This chapter will examine curriculum for California adult education within the following context:

- Background
- Current Status
- Future Needs

California will be experiencing rapid social and economic change over the next decade. A school's curriculum may be under constant revision as educators struggle to meet the changing needs of their students.[1] There can be no doubt that adult educators throughout the state will respond to future challenges with the high quality of work that has become characteristic of their efforts in adapting to past social upheavals.

2.1 Background

Current curricula are framed by statutory requirements, policy decisions, and state sponsored curriculum projects. This section will explore:

- Legal Requirements
- Competency Based Curriculum
- CBAE Mandate

[1] See Fred Best, *Adult Education Needs for a Changing State: Discussion Paper on Long-Term Adult Education and Training Needs in California*, Pacific Management and Research Associates, Sacramento, November 1988.

These components provide the foundation on which California's adult education programs are built.

LEGAL REQUIREMENTS

California will be experiencing rapid social and economic change over the next decade. A school's curriculum may be under constant revision as educators struggle to meet the changing needs of their students.

The state itself creates the boundaries for public school adult education curriculum. Minimum diploma requirements are designated. Legislation specifies the ten program areas that receive state funding: elementary and secondary basic skills, English as a second language (ESL), citizenship, parenting, substantially handicapped, vocational, older adults, home economics, health and safety, and apprentices.[2] Each of these program areas is defined.[3] A program area may consist of many individual courses. Course outlines are required, and their components are prescribed.[4] Courses adopted by the local board of trustees are submitted to the Adult Education Unit of the California Department of Education for approval.

Local agencies are authorized *"...without the approval of the State Department of Education to establish and maintain community service classes."*[5] These classes are fully self-supporting and do not have to be staffed by a certificated teacher.

Community college noncredit programs are funded for the same ten areas of instruction, carrying the same definitions.[6] Curriculum committees established by agreement of the local college and academic senate recommend courses and their course outlines to the district governing board for adoption.[7] Courses are then submitted to the Chancellor's Office for state approval. If a course is subsequently extensively modified, it is resubmitted.

Again, similar to the K–Adult system, community service classes can be offered without the approval of the Chancellor's Office.[8]

It is clear from this section that state funded curriculum offerings of public school adult schools and community college noncredit divisions are the same. Thus, we have two comprehensive public adult education systems in the state. The primary difference is governance and perhaps that needs to

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[2] *Education Code 41976*; also see *Section 100* of the ***California Adult Education Handbook***, California State Department of Education, 1986.

[3] See *Section 200* of the ***California Adult Education Handbook***, *Op. Cit.*

[4] *Education Code 52506*; also see *Section 100* of the ***California Adult Education Handbook***, *Op. Cit.*

[5] *Education Code 51810*; also see ***California Adult Education Handbook***, *Op. Cit.*

[6] *Education Code 84711.*

[7] *California Administrative Code, Title V, Section 55002.*

[8] *Education Code 78300–78305.*

be clarified here. The ***Education Code*** delegates primary responsibility for adult education to the public school districts. **Chapter 3** of the ***Education Code*** establishes the authority for adult education. ***Sections 8538, 8516*** and ***8530-37*** further define adult education offerings and establish a delineation of function between the high school and unified school districts and community colleges. An agreement is required for a community college to offer a course that is the primary responsibility of the high school and unified school district.[9]

State funded curriculum offerings of public school adult schools and community college noncredit divisions are the same.

Based on the agreements referred to above, fifteen community colleges have primary responsibility for adult education in their areas. These include some of the largest programs in the state. This dual responsibility for adult education means dual legislation whenever adult program curriculum becomes the subject of legislation.

High School Diplomas

Requirements for high school graduation are spelled out in ***Education Code 51224.3a***. They include:

> . . .three courses in English; two courses in mathematics; two courses in science, including biological and physical sciences; three courses in social studies, including United States history and geography; world history, culture and geography; a one-semester course in American government and civics, and a one semester course in economics; one course in visual or performing arts or foreign language; two courses in physical education unless the pupil has been exempted pursuant to the provisions of this code; and such other course work as the governing board of the school district may by rule specify.

The code makes provisions for *". . .alternative means for students to complete the prescribed course of study which may include practical demonstration of skills and competencies, supervised work experience or other outside school experience, interdisciplinary study, independent study, and credit earned at a postsecondary institution."*[10] In addition, passing minimum proficiency tests, designed to match local district curriculum, is a prerequisite for graduation.[11]

Adult high school diploma programs operate under these same requirements. Use of the *". . .alternative means for students to complete the prescribed course of study . . ."* is evident in the many self-paced learning laboratories found throughout the state's adult education programs.

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[9] California Community Colleges, ***Program and Course Approval and Reporting Procedures Handbook***, Chancellor's Office Sacramento, 1985, page IV-4.

[10] Adult education received authorization to conduct independent study in 1990. In prior years adults could use the K-12 independent study program.

[11] *Education Code 51217.*

There is no standard procedure for issuing high school diplomas in the community college noncredit programs that have primary responsibility for adult education. Some diplomas are issued in the name of the appropriate high school district. A common practice is for the names of both agencies to appear on the diploma.

COMPETENCY BASED CURRICULUM

*The Adult Performance Level (**APL**) study published . . . in 1975 . . . took a new approach to defining adult literacy. The study showed that one out of five adults functioned with difficulty in today's society.*

The impetus for a competency based curriculum for adult learners was strengthened with the *Adult Performance Level study* (**APL**) published by the University of Texas in 1975. The study took a new approach to defining adult literacy. Rather than reporting adult literacy in child-based grade levels, it established a three level scale for rating reading and writing tasks which adults need to be able to perform if they are to function independently in American culture. Samples of these tasks include completing job applications and reading safety warnings. The APL study included sixty-five competencies in such life roles as consumer of both goods and services, citizen, parent or employee. The study showed that one out of five adults functioned with difficulty in today's society. One in three was considered competent, but not proficient.

Publication of the APL study gave dramatic validation to the movement in adult education variously referred to as Competency Based Education (**CBE**), Adult Competency Education (**ACE**), or Competency Based Adult Education (**CBAE**). The latter was the terminology used in California through 1988.[12]

Similar surveys or replications of the APL study were undertaken in a number of states. The *California Adult Competency Survey* was completed in 1978 and confirmed the applicability of the APL study to California.[13] California's study was updated in 1987.[14]

One result of these studies in California was the targeting of federal *Adult Education Act* funds on Competency Based Adult Education (**CBAE**) projects.[15] These projects fell into two phases:

[12] The "A" was officially dropped in 1988. The Adult Education Unit is now a part of the Youth, Adult and Alternative Educational Services Division. Since all units within the division advocate competency based programs, the more generic CBE is now used for division programs. Many projects developed in California have "CBAE" in the title, and the term is still frequently used by adult educators.

[13] Donald A. McCune, "The California Adult Competency Survey: A Preview and Analysis of National Implications," ***Adult Literacy and Basic Education***, 1979. The survey was conducted by the NOMOS Institute, Berkeley, California.

[14] Donald Dixon, Merril Vargo and Davis Campbell, ***Illiteracy in California: Needs, Services, and Prospects***, SRA Associates, July 1987.

[15] The *Adult Education Act* (P.L. 100-297, as amended) provides funds for basic skill programs. In California the funds are administered by the Adult Education Unit of the California Department of Education. Community college noncredit divisions, public school adult schools, community based organizations, and private sector organizations that meet the requirements are all eligible to apply for these funds. Part of the funds (*Section 353*, formerly *Section 309* or *310*) are set aside for experimental, demonstration, dissemination, research, or teacher training projects.

- Curriculum Writing Projects
- Curriculum Support Projects

These initiatives focused on the life skills, which the studies discussed above, identified as lacking among California's adult population.

Curriculum Writing Projects

The APL and subsequent studies revealed a major deficiency in adult curriculum. Traditionally, that curriculum concentrated on basic skills with little emphasis on adult applications. Commercial materials with a life skill orientation were all but nonexistent. So California used some of its federal monies to fund three major life skill based curriculum projects:

- Competency Based Live-Ability Skills
- Integrated Competency Based Bilingual Vocational ESL
- Competency Based Adult Diploma Project

These projects focused on integrating basic and life skill instruction, so that basic skills could be applied to the tasks of independent adult living.

These projects focused on integrating basic and life skill instruction, so that basic skills could be applied to the tasks of independent adult living. Content centered on the competency areas of consumer economics, community resources, health, occupational knowledge, and government and law.[16]

Competency Based Live-Ability Skills (CLASS)

Developed by instructors from Clovis Adult School, this series of modules targeted adult basic education (ABE) students. Each unit provided pre- and post-tests, student materials and teacher materials. Later refinements included methods and materials suitable for English as a Second Language (ESL) instruction. In addition to the five standard competency areas, CLASS included a series of lessons on interpersonal relations. CLASS was accepted by and funded for national dissemination through the National Diffusion Network.

Integrated Competency Based Bilingual Vocational ESL (ICB—VESL)

Sponsored by Chinatown Resources and Development Center in San Francisco, this project targeted the area of occupational knowledge. Based on the concept that second

[16] These emerged as the standard terminology for the competency areas in California. Variations of the wording are used in some local programs and in some studies from other geographical regions.

language students could acquire prevocational skills needed for job training simultaneously with learning English, this project was a pioneer in the field of Vocational English as a Second Language (**VESL**). A significant component of the project was the development of cultural notes in four languages to accompany the English lessons.

Competency Based Adult Diploma Project

The Los Angeles Competency Based Achievement Packets (**L.A. CAPS**) integrated life skill competencies into both the required and elective units needed for a high school diploma. The forty-four packets, each consisting of several modules, came with pre and post assessment instruments. In addition to the standard competency areas, CAPS included a series of packets on home and family.

The quality of these APL spawned curriculum projects is confirmed by the fact that all three were picked up by and achieved success as commercial publications.

There were other smaller curriculum projects that also received federal funding. Without negating those efforts, the three major projects discussed above were broader in scope and achieved wider dissemination. They covered the full range of adult education's primary responsibilities (*e.g.* ABE, ESL, and high school diploma programs). The quality of these APL spawned curriculum projects is confirmed by the fact that all three were picked up by and achieved success as commercial publications. The CLASS project materials are marketed as ***LifeSchool***. The ICB-VESL project is now known as ***English That Works***. The high school project is still called ***CAPS***.[17]

Curriculum Support Projects

Simultaneously with curriculum development, other projects were pointing the way toward competency based program implementation. Repositories for competency based resource and curriculum materials were established in five county offices of education by the Information, Collection, and Dissemination Service (ICDS), a San Diego Community College District project. Their catalog and newsletter publicized CBAE materials and activities. A monograph and a process model, both under the leadership of the Adult Education Center at San Francisco State University, were developed. California Adult Competency Education (**CACE**) was broad in scope, whereas the California Competency Consortium (**CALCOMP**) targeted high school diploma programs. CALCOMP included field testing of the model.

[17] Predating the APL study, Los Angeles had funding for an ESL curriculum project which was later commercially published as *ESL for the 21st Century*.

The Adult Education Unit leaders were committed to the philosophy of CBAE . . . Based on that conviction, they made the far-reaching decision that implementation of a CBAE program would be a requirement for local agencies applying for the federal supplemental grants.

The curriculum and process model projects were completed by the 1980–81 school year. Curriculum, instruction, and assessment, along with supportive management and guidance service, form the basic components of a competency based system. With curriculum in place and teacher training underway,[18] attention was turned to assessment. The California Adult Student Assessment System (CASAS) got its start as a funded project in 1980 for the purpose of developing an assessment system appropriate for both adults and competency based programs.[19] The impact of CASAS on competency based curriculum will receive more attention in a later section of this paper.

CBAE MANDATE

On the path to CBAE, the Adult Education Unit of the California Department of Education had been "leading," allocating massive amounts of federal funds to the projects discussed above, but there were too few "followers." Unit leaders were committed to the philosophy of CBAE, and firm in the belief that it was the most effective way to attack functional literacy deficiencies. Based on that conviction, they made the far-reaching decision that implementation of a CBAE program would be a requirement for local agencies applying for the federal supplemental grants.[20]

Among other provisions of the 1982 *State Plan* for use of federal funds were:

- Curriculum design and content that is based upon the philosophy, process and procedures of competency based learning.
- A student assessment system which is competency based.
- A program of ongoing staff development for all certificated staff involved with the federal program.
- Counseling and guidance services to assure that all students are properly placed in the appropriate competency level, and that their progress is monitored with appropriate assessment instruments.[21]

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[18] Staff development is covered in *Chapter 4* of this paper.

[19] Following adoption outside of the state, the 'C' in CASAS evolved from "California" to "Comprehensive." CASAS is sponsored by the San Diego Community College District Foundation.

[20] In addition to the special projects which have been discussed, *Section 321* (formerly *Section 306*) of the *Adult Education Act* allocates supplemental grants to local agencies. The manner in which the funds are distributed is established in the State Plan, which is submitted every three to four years.

[21] ***The California State Plan: 1982 Submission***, California State Department of Education, page 19. At that time CBAE was defined as a "*performance based process leading to demonstrated mastery of basic and life skills necessary for the individuals to function proficiently in society.*" In 1989, in response to a comment at a public hearing for the new State Plan the definition was

Along with the mandate came other support projects that facilitated implementation at the local level. In addition to continuing CASAS there were two major staff development projects and one for dissemination. The CBAE Staff Development project was developed through the Adult Education Center at San Francisco State University. The Association of California School Administrators (ACSA) sponsored both the ESL Teacher Institute and the Dissemination Network for Adult Educators. Staff development will be discussed in **Chapter 4**.

The CBAE mandate impacted curriculum throughout the state. After some initial resistance,. . . CBAE came to enjoy widespread support.

The CBAE mandate impacted curriculum throughout the state. After some initial resistance, primarily due to difficulties with record keeping, CBAE came to enjoy widespread support. Implementation of CBAE curriculum and processes was and continues to be uneven, but significant elements of it are now institutionalized into the local agencies receiving federal funding.

An extensive evaluation of the CBAE mandate was undertaken from 1984–86. Excerpts from the conclusions on the section addressing curriculum are included here:

> **Improved Curriculum Organization.** The implementation of CBAE at the local agency level was associated with an overall improvement in the organization of ESL and ABE curricula. Improved curriculum organization took two characteristic and complementary forms: (1) the development or adaptation of competency lists and (2) the specification of course outlines that designate competencies by basic skill difficulty level and recommended teaching materials.
>
> **Relevance of Life Skills to Students and Student Needs Assessment.** All students interviewed could identify some specific life skills that they had acquired and used as a result of CBAE instruction. Most supported a life skills curriculum orientation. Student needs assessment apparently takes place in many programs, but identifiable program or curriculum changes made as a result of such needs assessment are often difficult to isolate.[22]

In summary, state legislation set the minimum requirements for a high school diploma and authorized ten areas of instruction eligible for state funding. Other work impacting adult education curriculum was initiated by the Adult Education Field Services Unit.

Expenditure of funds from the federal *Adult Education Act* is limited to elementary and secondary basic skills. For that

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modified to be more generic: *"Competency based education is a performance-based process leading to demonstrated mastery of skills or knowledge. This process involves identifying specific, measurable competencies or outcomes; progressing as quickly as possible to more difficult competencies yet paced to each individual's rate of learning; encouraging open entry, open exit delivery of services; encouraging alternative instructional methods and materials, and ongoing assessment of students, with a capacity to provide students with criterion-referenced test measures and immediate feedback on their performance."*

[22] Judith Alamprese, *et al., Investing in Change*, CBAE Staff Development, San Francisco and CASAS, San Diego, 1987, page 50.

reason the major curriculum work and other supporting projects sponsored by the Adult Education Unit thus far have been limited to those levels of instruction.

2.2 Current Status

There is no clear demarcation between "background" and the "current" status of curriculum work for adult education. One obviously leads to the other. Some work is finished, some ongoing, and some in the planning stage. This section will review "current" curriculum efforts by the source of the activity:

- Department of Education Guidelines
- Project Curriculum Work
- Contribution of Local Agencies

Just as the past blends into the present, these three levels of activity merge into and complement one another.

DEPARTMENT OF EDUCATION GUIDELINES

The California Department of Education established model curriculum standards for each of the courses required for a high school diploma. From these, more refined curriculum frameworks have been developed. There are frameworks as well for courses other than the specific diploma requirements. Since adult education agencies have diploma programs, these guidelines apply to the courses attended by adults just as they do for the youth high schools.

Thus far, there are no curriculum frameworks for the other instructional areas offered in adult schools. The Adult Education Unit has initiated the development of those. Three areas have been targeted for early attention: ESL, parenting, and vocational education. Of these, only the work on the ESL framework is actually underway.

The *ESL Model Curriculum Standards and Framework* are being developed by a field based committee of ESL instructors.[23] They are currently in the second year of the seven year time line, as shown below:[24]

[23] Both adult schools and noncredit divisions are represented on the committee. This developmental work is being supported, in part, by the Adult Education Institute for Research and Planning (AEI), Sacramento. Committee members are serving on a combination of personal and local agency time.

[24] Draft, *Sample Planning Cycle*, Adult Education Unit, California Department of Education, September 11, 1989.

1988–89	Select and convene committee to formulate action plan for developing standards and framework.
1989–90	Assess current ESL curriculum in cross section of agencies; verify what "is" and what "should be"; develop standards; begin framework.
1990–91	Awareness, review, and validation of standards at local site; solicit field input; finalize framework based on revised standards.
1991–92	Local agencies assess and revise local curriculum based on model curriculum standards; plan implementation of standards and framework.
1992–93	Implementation.
1993–95	Continued implementation, evaluation, and modification based on evaluation.

Work in progress sponsored by the Alternative Education Unit has relevance for adult education. A draft document, "Quality Indicators for Alternative Education Programs in California Public Schools", has been prepared with input from a field based committee. The document is currently formatted for use as an agency self-assessment. The instrument is divided into six categories, one of which is curriculum.[25] Sample topics of the items in the curriculum section cover state and district frameworks, competency based programs, scope of course offerings, instructional materials and resources, use of educational technology, and a curriculum that reflects the needs of the social composition of the community.

Thus, the Department has guidelines for one area of authorized instruction, *e.g.* diploma programs, and the Adult Education Unit is currently working on a second area, ESL. The work on frameworks for two other areas, parenting and vocational education, will soon be underway. The remaining areas are yet to be tackled. Finally, the Alternative Education Unit is working on quality indicators for curriculum that may be partially adaptable for adult education.

PROJECT CURRICULUM WORK

The major curriculum projects supported by the state with federal funds were completed in 1981. From that time until the ESL Curriculum Model Standards and Framework Committee

[25] The other categories are school management, instructional practice, educational climate, guidance and counseling, and self esteem factors. For information on these quality indicators, contact Bob Ehlers, Consultant, Alternative Education Unit, California Department of Education, Sacramento.

started its work in 1989, the Adult Education Unit had not specifically funded curriculum development.[26] However, much work with direct impact on curriculum continued under the umbrella of the Comprehensive Adult Student Assessment System (**CASAS**).[27] Developmental work is conducted with the participation and guidance of the CASAS Consortium, comprised of local adult education agencies.

CASAS is not a curriculum. It is what its name says, an assessment system, along with the management tools and products needed to facilitate its use. The impact that CASAS has had on curriculum comes from some of its core products and the work from some of its committees:

- The Competency List
- The Curriculum Index and Matrix
- Committee Work

The project was funded to develop assessment instruments to match the competency based curriculum which the Adult Education Unit was developing and disseminating for use. Thus, from its inception there has been a symbiotic relationship between local curriculum and this assessment project.

The Competency List

The competency list is the product that is most frequently referred to as the "CASAS curriculum." That erroneous interpretation reverses the order of the procedures that are followed. The list is compiled from competencies found in the curricula of the local agencies that are members of the Consortium. Suggestions for competencies come from those local agencies, and 80 percent of the consortium members must agree to any inclusion on the list.

The competency list is divided into content areas: consumer economics, community resources, health, occupational knowledge, government and law, computation, and recently added, domestic skills. Each competency statement has a code number. The first digit represents the content areas mentioned above. The remaining digits further refine the content area down to a single competency statement. There are currently just over 200 competency statements on the list, which is updated and revalidated annually.

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[26] As the CBAE movement gained momentum throughout the country, commercial publishers responded. There is no longer a shortage of competency based, life skills oriented commercial materials.

[27] General background materials on CASAS are found in numerous of that project's publications. Unless otherwise cited, specific information in this section was confirmed from the annual CASAS *Summer Institute Manual*, San Diego Community College District Foundation, June 1989.

Although not a curriculum itself, the list can be used as a starting point for a local needs assessment for new programs or for reconfirmation of curriculum for existing programs.[28]

The Curriculum Index and Matrix

The *Curriculum Index and Matrix* is a reference tool for locating commercial materials that address specific competencies. Entries are coded by publisher, title and page or chapter numbers on one axis. These are cross-referenced to competency number, program (ABE or ESL), and level of difficulty.

Use of the matrix facilitates locating materials to match local curriculum. Inclusion in the matrix is not a product endorsement. However, materials are screened for appropriateness for competency based programs. The matrix is updated annually.

Committee Work

Committees are the heart of consortium work. Committees are formed as needs are identified and disbanded when tasks are completed. Much of the work of the early ESL committee had direct curricular impact.

More recently, the writing assessment committee was formed in 1985 and completed its work in 1989. This committee was formed as a direct result of concern about the lack of writing skills in the ABE and ESL populations. It was no surprise, then, that this reflected a weakness in the curriculum; the skills were not being taught. Student needs assessments were conducted and the developmental process began. The end product was a writing assessment manual. Curriculum was defined along the way. Although designed for assessment, the manual also includes a section on teaching writing and has a bibliography of pertinent resource and instructional materials.

The various checklists designed by the employability committee help define ABE and VESL curriculum.[29] Developed specifically for prevocational remediation, they can be used in any ABE or VESL classroom as a student needs assessment.

The high school committee has blended project and California Department of Education work. Starting with the Department's *Model Curriculum Standards*, committee

[28] There are numerous competency lists which can be drawn upon for this purpose. Competencies from the APL study or the New York External Diploma Program are two examples.

[29] Check lists cover vocational basic skills, job search, resumes, applications, interviews, cover letters, and work maturity.

members wrote specific student course objectives, learning applications, and adult (life role) applications. This refinement of model curriculum standards to adult applications was done for each of the required courses for a high school diploma. The curriculum work was completed as a prelude to writing assessment items for field testing. This committee is still active, but for the most part is now in the item writing, field testing and test construction phase.

Remaining work of the high school committee consists of a language arts task force. They are identifying ways to effect a better curriculum and assessment transition from ABE and ESL programs to high school level language arts classes. In addition, the committee is assessing interest in working on interdisciplinary, cooperative learning units for open entry, open exit learning labs.

In summary, the impact that CASAS consortium members have had on curriculum comes from answering the question "Assess what?" In responding to that question, specific curriculum areas have been refined.

CONTRIBUTIONS OF LOCAL AGENCIES

Adult educators share with one another. One result . . . is that within a short period of time lessons developed in one part of the state may be observed in classrooms 500 miles away.

Model curriculum standards, curriculum frameworks, and course outlines notwithstanding, it has been asserted that the "real" curriculum is created by the teacher in the classroom. It would be difficult to argue with that. The wealth of materials that have emerged from local programs is staggering.

Fortunately, adult educators share with one another. One result of sharing is that within a short period of time lessons developed in one part of the state may be observed in classrooms 500 miles away.

This section will cover a partial review of curriculum contributions of local agencies within the following framework:

- Meeting Challenges
- Exemplary Programs
- Curriculum Grants
- Publishers Beckon
- Potential for Dissemination

There is danger in singling out contributions of individual agencies. Some significant curriculum work from other agencies undoubtedly will be omitted for lack of information

about it. No attempt will be made to recognize the work of individuals at this time.

Meeting Challenges

The decade of the eighties hosted three major social policy initiatives that had tremendous impact on adult school programs:

- Refugee Policy
- Job Training Initiatives
- Immigration Reform and Control Act

These policies will be discussed here only in terms of the impact they had on curriculum and the response that local agencies made.

Refugee Policy

The first refugees from Southeast Asia arrived in 1975. Smaller in number and for the most part fairly well educated, this group barely foreshadowed the needs of the boat people who would arrive by the thousands in 1980 and beyond. They landed in San Diego (Camp Pendleton) and quickly were settled throughout the state.

The very first materials (1975–76) to address the needs of this new population were disseminated statewide through county offices of education. But they originated with the noncredit division of the San Diego Community College District. And San Diego, both through necessity to meet their own needs and a tradition of leadership in adult education, continued to produce and share curriculum with the rest of the state. Eventually, their locally developed curriculum was published as ***English for Adult Competency***.

The Southeast Asian refugees of the 1970's and 1980's were a new student population. English as a Second Language had always been a significant segment of adult programs. However, Spanish had been (and remains) the dominant language of class members. There is a big difference in the approach taken and the materials used with a student from Central or South America with three years of primary schooling and the refugee from a culture with either no written language or a language utilizing a non-Roman alphabet. For the first time many districts were establishing literacy and pre-literacy levels of ESL.

For lack of adequate commercial materials, teachers struggled, wrote and traded curriculum. Much of the exchange was informal, accomplished through networking. Other materials were packaged in a more formal manner and were

disseminated through the Dissemination Network for Adult Educators (**See Appendix A**).

There was undoubtedly a need for these literacy levels of classes before, but it was masked and, thus, ignored. The Hispanic student had a support community in this country that could help with the survival skills a newcomer needs. The Southeast Asian refugee, for the most part, had only the ESL classroom.

It is interesting to speculate upon how much the arrival of the Southeast Asian refugees impacted the rapid acceptance of the life skills oriented CBAE mandate. . . Once tried, it was found to be appropriate for the broad spectrum of students served in adult programs.

It is interesting to speculate upon how much the arrival of the Southeast Asian refugees impacted the rapid acceptance of the life skills oriented CBAE mandate. It was an approach to instruction which perfectly fit the needs of the refugee population that were flooding the state's adult classrooms. Once tried, it was found to be appropriate for the broad spectrum of students served in adult programs.

Job Training Initiatives

The Job Training Partnership Act (**JTPA**), Greater Avenues for Independence (**GAIN**), and its federal counterpart, the Family Support Act Federal JOBS Legislation, are similar in many respects. All have the goal of providing the needed support services, education, and job training to enable the unemployed or those with low income to obtain and keep self sustaining employment. Differences lie in governance.[30]

The impact on adult education curriculum is that the adult basic education (**ABE**) classroom (and to a lesser extent, ESL as well) has become the vehicle of choice to provide the prevocational remediation that many participants need.[31] The result of this is a greater emphasis on prevocational skills in the curriculum.

Two federally funded projects provided the foundation to meet this need. The older of the two is Adult Competency Education (**ACE**) developed by personnel from San Mateo County Schools Office of Education. ACE is one of the earliest vocational adult basic education (**VABE**) curricula to emerge following the APL study. It defines basic math, reading and writing skills in terms of job related tasks.[32] ACE also developed vocational guidance related lessons for classroom use. ACE was adopted and is still in use by San

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[30] JTPA is funded through the Department of Labor and is administered locally by Private Industry Councils (PIC). GAIN was designed as welfare reform for California's Aid to Families with Dependent Children (AFDC) and carries provisions for mandatory participation for some. It is administered locally through the counties' social service departments. JOBS is also administered through social services.

[31] From 1986–1989, approximately 34 percent of GAIN students were referred for adult basic education. Another 19 percent were referred for a high school diploma or GED. Less than 40 percent required no educational referral. See GAIN III, CASAS, San Diego, August 1989, page 21.

[32] This work was initially based on identifying the basic skills required for 70 entry level jobs. The project also developed Entry Standard Assessments to determine the need for remediation.

Mateo County JTPA programs. It has had additional adoptions through the Dissemination Network for Adult Educators.

The Employability Competency System was developed through the CASAS Consortium with specific funding from JTPA. It is widely used for GAIN as well. Its products are referred to in the paragraph on the employability committee on page 18.

Immigration Reform and Control Act

It is fair to say that no one was prepared for the impact [amnesty] had on local programs.

Although accurate enrollment projections had been made by California Department of Education personnel initially assigned to work with IRCA, it is fair to say that no one was prepared for the impact this initiative had on local programs.[33] Federal guidelines for the educational requirements were completed well after the full force of a dramatic increase in local program enrollment in the fall of 1988. Commercial materials and Immigration and Naturalization Service sponsored ESL materials were not available until spring or summer of 1989.

Local agencies and an ad hoc group of CASAS Consortium members filled the gap. Both Hacienda La Puente Adult School and San Diego Community College District had early curricular contributions to share. Foresight on the part of Hacienda La Puente administrators led them to put two curriculum writers to work during the 1987–88 school year. By the time of the Competency Based Education conference in the spring of 1988, they had fully developed intermediate ESL Civics and U.S. History course materials to demonstrate. Beginning level materials were available in the fall of 1988. "Self published," these materials were made available at cost. The need for the materials was dramatized by the fact that purchases were made by 213 California agencies and in 29 other states.

San Diego willingly shared ESL Civics course objectives and sample classroom activities. These were disseminated in both print form and through workshops. Later the CASAS task force, with funding from the California Department of Education's IRCA funds, disseminated detailed, leveled, course objectives.

In the San Francisco Bay Area, Sequoia Adult School sponsored one of the San Diego workshops for neighboring districts. They also developed and disseminated civics lessons

[33] The *Immigration Reform and Control Act* of 1986 granted amnesty to undocumented individuals who had been living in the country prior to January 1, 1982. Legalization was also extended to those who worked in agricultural jobs at least 90 days between May 1985 and May 1986. Upon verification of this status a temporary residence card, good for 30 months, was issued. In order to transition to permanent residency the pre-'82's had to demonstrate simple knowledge of English and basic understanding of United States History and Government. This could be done by passing a test or attending an appropriate class for a minimum of 40 hours and receiving a Certificate of Satisfactory Pursuit.

designed to be integrated into regular ESL instruction at the literacy, low beginning, and high beginning levels. Also in the San Francisco Bay Area the Coalition for Immigrant and Refugee Rights and Services funded development of a series of civics lessons utilizing cooperative learning activities and emphasizing community involvement. These were originally disseminated through workshops for Coalition members, then other IRCA funded agencies. Later, the materials were sold.

Exemplary Programs and Practices

The National Diffusion Network (**NDN**), under the auspices of the U.S. Department of Educational Research and Development, disseminates information about and provides funding to adopt/adapt exemplary educational programs. The catalog from NDN describes the selection process:

> The term 'exemplary program' is confirmed only after a project has been approved by the Department of Education's Program Effectiveness Panel.[34] Approval by the Panel means that Panel members have examined objective evidence of effectiveness . . . and are convinced that the program has met its stated objectives at the original development or demonstration site(s). In addition, the program developer has proved that the program will meet the educational needs of others in similar locations.[35]

The catalog currently lists six exemplary programs for adult education (**See Appendix B**).

Modeled after NDN, The Dissemination Network for Adult Educators (**DNAE**) operated in California from 1981 through 1988. Along with other dissemination activities, DNAE identified exemplary programs and practices in California's local adult education agencies. A program could be nominated by any adult educator. Materials from the nominated program were then evaluated and a site visit by one or more dissemination panel members (all local practitioners) was made to verify exemplary status. Once selected, descriptions of the program appeared in the DNAE catalog. Any agency that was a participant in the federal supplemental grant program could then adopt/adapt a program at no local cost for initial training and a specified amount of follow-up assistance.

Some of DNAE's exemplary programs addressed staff development, guidance, or assessment. Many were centered on curriculum. Program titles and sponsoring agencies of the projects appear in **Appendix A**.

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[34] Formerly known as the Joint Dissemination Review Panel

[35] *Educational Programs That Work*, Edition 15, Sopris West, Inc., in cooperation with the National Dissemination Network, Longmont, Colorado, 1989, page v.

Dissemination of California's exemplary programs and practices, based on the models described above, is currently in abeyance. There are no plans to reinstate formal program adoption activities. However, some of the other DNAE activities have been assumed by the newly established Outreach and Technical Network (OTAN).[36] These include dissemination of program information, products (hard copy materials such as reports, curriculum materials, videotapes), and services (technical assistance, training workshops).

Curriculum Grants

There have been two sources of funds available to individual instructors or districts which could impact curriculum. The community colleges award such grants under their Fund for Instructional Improvement (FII). The second source was federal funds under the *Adult Education Act*. In the recent past, instructors from agencies receiving local grants could apply for Mini Grants. Many of these were devoted to curriculum and instruction.

The Fund for Instructional Improvement was created in 1977 by *Assembly Bill 1173*. Originally grant proposals targeted individual curriculum development projects. Over the years the focus has changed, with curriculum remaining as one of several funding areas. For example, the fund can now be used for statewide concerns as well as local curriculum priorities. Eligible topics now specifically include staff development. In addition, there is an annually determined list of educational issues selected by the Board of Governors, referred to as the Board's Basic Agenda. The current Basic Agenda includes curriculum for ESL and basic skills.

The fund is divided into small and large grants. At least 20 percent of the fund must be awarded in small grants of up to $15,000 for individual or local agency projects.[37] Some of the projects funded through these grants are applicable to the noncredit level. Although no longer limited to curriculum, the Fund for Instructional Improvement is a valuable resource for curriculum development at both the local and state levels of the community college system.[38] Selected FII projects impacting curriculum at the noncredit level are found in **Appendix C**.

The Mini Grants were much smaller and definitely targeted for the individual instructor. They were available for five years from 1984–85 through 1988–89. Originally funded at

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[36] OTAN is funded under the *Adult Education Act*, P.L. 100-297, *Section 353*, via a contract between the California Department of Education and Hacienda La Puente Adult Education.

[37] The requested appropriation for 1990–91 is $736,000. If funded at that level $147,200 would be available in the small grant category.

[38] Chancellor's Office, Fund for Instructional Improvement, Request for Proposal, 1990–91 Academic Year, California Community Colleges, Sacramento, 1990, pages 1–10.

$1,000 per project, that amount was increased to $1,500. Instructor teams of two or three could jointly apply for a grant and increase the size of the grant proportionately. These were not intended to be developmental funds. Rather, the primary purpose of the grants was to evaluate pre-existing CBAE practices or materials in the areas of instruction, guidance or management. Refinement of existing practices or materials was allowable as long as there was an evaluation component included. It was this refinement of teacher-made materials and the resulting dissemination that impacted curriculum.

All projects were represented at round table discussions at the annual CBAE conference. Each year the final reports were reviewed by a group of practitioners to identify those projects considered to be exemplary. Those project personnel were then specifically invited to present individual workshops the following year at the conference.[39]

Project titles and agencies of selected Mini Grant reports impacting curriculum and instruction are found in **Appendix D**.

Publishers Beckon

This paper has previously mentioned five curriculum projects that later achieved success as commercial publications. Four of these projects received developmental funding through the *Adult Education Act, P.L. 91-230, Section 309* (**Curriculum Writing Projects**, page 12). The fifth was developed with local funds (**Refugee Policy**, page 20).

It should be noted here that many individual instructors have successfully collected, organized and marketed the curriculum materials they had developed in the course of designing lessons for their students. There was a small California publisher (now absorbed by one of the larger publishing houses) that specialized in teacher made materials. Invariably these materials prove themselves popular with their colleagues.

[39] There were many side benefits to these projects. In addition to increasing the involvement of individual staff members, the recognition each earned for writing a successful proposal and giving a conference presentation highlighted the value of individual contributions. Project topics also served as an informal needs assessment at the state level by emphasizing what local concerns were. Guidance activities were thus identified as one of the weakest areas in CBAE by this process as well as by a broad CBAE evaluation study.

There is no source that recognizes the published materials of California's instructors from public school adult schools, community college noncredit divisions, nor community based and volunteer organizations active in the state's adult education programs. Personnel from these agencies are invited to submit lists of their instructors' publications to AEI. A composite list can be prepared to be included as an appendix in the feasibility study for this recommendation.

In addition to published materials, there is much informal sharing of teacher developed curriculum materials, both within and across agencies. This has been facilitated in recent years by the contacts made and developed through statewide consortia and more informal area ABE/ESL coordinator/resource instructor networks.

Potential for Dissemination

The current lack of a formal mechanism to disseminate locally developed and other hard copy products was discussed under **Exemplary Programs and Practices** (see page 23). This gap is to be filled by the Outreach and Technical Assistance Network (**OTAN**) through:

- Electronic Communication System
- Regional Resource Libraries
- Archiving Materials and Products

These three components have their own functions and characteristics. Once fully established and working in concert, a new dissemination system will be in place.

Electronic Communication System

An electronic on-line service is a communication system utilizing computers. A computer located at one site accesses the telephone system through a modem (**See Appendix E** for glossary of computer and instructional technology terms). Thus, a "call" can be made to another computer on the same on-line system. Information generated or stored in one computer can be sent to another through the modem and telephone connection. Communication can be either public or private. An electronic forum serves the same function as a bulletin board in the corner market or laundromat. Anyone who wants to can post "notices" for the public to read. For private electronic mail (E-mail) data can be transmitted and received on a selective basis.

OTAN personnel evaluated a number of electronic information services.[40] CONNECT has been selected as the electronic communication system for California adult education agencies.[41] The system was demonstrated at California's March 1990 Competency Based Education Conference.

The electronic communication system is being piloted with 15 to 20 sites during the spring and summer of 1990. Once the pilot is completed, all adult education agencies will be encouraged to subscribe to the service.

Upon subscribing to the CONNECT/OTAN on-line service, either private electronic mail, accessible only to a designated code, or public messages/material can be transmitted. These public messages will be directed to various information categories referred to as "forums." Forums dedicated to California adult education can be accessed by any California adult education agency or other interested party that subscribes to the system.

A number of the forums on the communication system impact curriculum. Specifically, there are forums for course outlines, lesson plans, curricular resources, and a round table. The round table can feature different topics periodically, provide a means for a public request for and exchange of materials on specific subjects, or facilitate group curriculum development projects. Demonstration versions of commercial software will also be available through one of the forums.

Any communication or material from the on-line system that appears on the computer screen can be printed, thus producing hard copy. Existing hard copies of uncopyrighted materials can be sent to OTAN for input into the system. As scanning devices become lower in cost, local agencies may want to acquire that equipment for their own use in transmitting documents to OTAN for posting on one of the various forums.

Regional Resource Libraries

In 1988–89, five CBAE Regional Demonstration Sites were selected. These sites have been renamed OTAN Resource Centers. A sixth site was added in 1989 and five more in June 1990. Current sites include:

- Baldwin Park Adult Education – Baldwin Park
- Grant Adult Education – Sacramento

[40] Evaluation criteria included ease of use, accessible by local phone call, cost of software and monthly subscription rates, among other items.

[41] For information on this electronic communication system, contact the OTAN Network Manager at (800)526–2451 (California only).

- Hayward Adult School – Hayward
- Mid-City ABE Center – Los Angeles
- Merced Adult School – Merced
- Metropolitan Adult Education – San Jose
- Rancho Santiago Community College – Santa Ana
- Riverside Adult School – Riverside
- Sweetwater Adult Education – Chula Vista
- Ventura Adult School – Ventura
- Watsonville/Aptos Adult School – Watsonville

A resource library is housed at each of these regional centers to facilitate dissemination of hard copy materials. Contents include previously developed training packets with accompanying videotapes, other pertinent video programs, resource documents, public domain software, commercial and teacher made materials. These items can be circulated for use in local agencies. Although library materials are being assembled as quickly as possible, there are still gaps in providing products of past developmental activities. (See **Archiving** section below.)

Archiving Materials and Products

OTAN has also been contracted to electrically archive and make available for dissemination the central resource library of the state's adult education materials and products. These include exemplary products and reports, developed by local agencies, from past federally funded projects, including mini grants. By far, the majority of these were curriculum projects. When the DNAE contract ended these materials were housed at one of three locations: the Vocational Occupational Information Center for Education (**VOICE**), the California Department of Education Library, or the Archives of the State of California. These products will be recollected, indexed, scanned and stored on the OTAN system for retrieval. They will be placed into one of the forums and will be downloadable to anyone subscribing to the CONNECT/OTAN system.

2.3 Future Needs

California's rapidly changing and increasingly technological society will continue to place demands on adult education programs.[42] The gap will widen between the

[42] For an overview of these projections, see Fred Best, *Adult Education Needs for a Changing State*, Pacific Management and Research Associates, Sacramento, 1988.

educational level of the population and the skills needed by the workforce of the 21st century. This section will highlight:

- Software Appropriate for Adults
- Needs Assessment

These will address one obvious need and then propose giving local agencies an opportunity to prioritize other curricular needs.

SOFTWARE APPROPRIATE FOR ADULTS

The lack of timely commercial materials to address the life skill deficiencies identified by the *Adult Performance Level Study* (**APL**) in the seventies has been noted previously. Similarly, there is too little software appropriate for adults in this age of computer assisted or computer based instruction. (**See Appendix E** for differentiation between CAI and CBI.)

Any review of instructional software reveals a scarcity of basic skills programs developed specifically for adults. . . Commercial developers need to be sensitized to the needs of the adult market.

Any review of instructional software reveals a scarcity of basic skills programs developed specifically for adults. The problem with using software that may be the appropriate level of difficulty but was developed originally for younger persons is that the graphics displayed on the screen tend to be juvenile. Additionally, such software tends not to utilize content that maintains adult interests nor is relevant to adult needs.

Just as commercial materials eventually caught up with APL identified needs, software geared to adult instruction will undoubtedly become more readily available at some point in the future. The questions are: what can be done to fill the gap now; and what can be done to encourage software developers to address the adult market? Possible answers can be found in:

- State Development
- Liaison with Commercial Developers

State development may be expeditious for an interim approach or for software tailored to meet specific needs. In the long run, commercial developers need to be sensitized to the needs of the adult market.

State Development

One approach to answering the first question posed above has been taken by a community college in North Carolina.[43] Utilizing federal funds from the Adult Education Act, software

[43] Central Piedmont Community College, Project READY, Charlotte, North Carolina.

for reading instruction has been developed at both the very beginning and upper ranges of the elementary level of difficulty. The software was developed by a team of reading instructors for content and instructional media specialists to handle the technical aspects. Authoring software was employed. This is software that provides the interactive electronic framework for any content of choice. Audio components are included. Forty instructional units have been developed over the past five years.

California adult educators may want to follow a path similar to the one described above. Certainly, federal funds have been employed previously in the highly successful curriculum projects reviewed earlier in this chapter.

California's practitioners have the expertise for the task. The successfully published materials of the curriculum projects, local agencies, and individual teachers are evidence of this. In addition, commercial quality staff training videotapes have been developed by both the CBAE Staff Development project and the ESL Teacher Institute (**See Chapter 4** for a review of these projects). The training packets of the latter are in the process of being licensed for commercial distribution.

Another model for meeting the need for software appropriate for adults is . . . a specific provision for public-private joint efforts in software development.

The development of "Made in California" software appropriate for adults would build upon and be a logical extension of these previous exemplary projects.

Liaison With Commercial Developers

Another model for meeting the need for software appropriate for adults is found in the *Educational Technology Act.*[44] (**See Chapter 3** for full scope of legislation.) The law has a specific provision for public-private joint efforts in software development. A 1989 brochure from the California Department of Education Office of Educational Technology explains:

> **Description:** Grants to software publishers to establish partnerships between the vendors and the State Department of Education. California schools will receive discounts, and the state will receive royalties on out-of-state sales of the resulting products.
>
> **Purpose:** To develop technology-based programs within the areas of English-language arts, mathematics, science, and history-social science to meet instructional needs of California students. To share developmental costs of significant technology-based

[44] The law of 1984–89, *Assembly Bill 803*, has been succeeded by the *Farr-Morgan-Quackenbush Educational Technology Act of 1989*, Chapter 1334, October 2, 1989. Formerly, and still referred to as, *Assembly Bill 1470*.

programs in order to bring to the marketplace programs that might not otherwise be developed, at least in the short run.

The *Adult Education Act, Public Law 100–297*, Section 353 monies could be used for curriculum specialists selected by the Adult Education Unit. These specialists could be assigned to cooperating vendors that have been selected from those who responded to a request for proposals.

There are several advantages to this approach. With the curriculum developers being selected by the Adult Education Unit, there would be some assurance that the products would meet identified needs. The already established software developers would have the technical expertise to move the projects along at an expeditious pace. They already have the marketing capability. The royalties recovered by the state could be returned for even more developmental efforts. Perhaps, depending on the amount recovered, some funds could support staff training in use of the new software.

Short of fully implemented partnerships with software developers, there would be need for increased liaison with them. Adult educators can work to educate them to the needs of the adult learner and the potential of the adult market. This is, in fact, one of the goals of OTAN. However, it is difficult for one project or a few people to influence the developmental and marketing directions of any company. A financial commitment on the part of the Adult Education Unit may provide the needed carrot.

NEEDS ASSESSMENT

In 1988 a research generated needs assessment based on statistical, demographic and sociological trends was developed for California adult education.[45] However, there has been no comprehensive survey of local agencies of expressed needs in the area of curriculum. To meet the guidelines for a competency based program, local agencies are encouraged to do this for their students. Thus, it would be in tandem with these guidelines that the state ask local agencies what is needed.

The discussion in the previous section of a need for software appropriate for adults was based on observation, reviews of software catalogs, and discussions with practitioners and with those who have expertise in educational technology. It is doubtful that many would argue with the conclusion. However, there is no formal, field based needs assessment on which to ground that assumption.

[45] Fred Best, *Adult Education Needs for a Changing State*, Op. Cit.

Increased emphasis on the higher order thinking skills and workforce literacy would . . . indicate that curriculum work may need to address these areas.

So it is with other possible curricular needs. Increased emphasis on the higher order thinking skills and workforce literacy would, on the surface, indicate that curriculum work may need to address these areas.[46] ESL appears to have most curricular needs in place or in development, with the major exception of useful software. Is that true of VESL? What about ABE? Should an ABE curriculum framework be given priority? Is there a need for development of beginning level reading materials? Can the field meet the challenge of the California Education Summit, *i.e.* reduce adult illiteracy rates by 5 percent a year for the next 10 years, without new, supported efforts in appropriate curriculum? Is anything needed at the secondary level? What about the other instructional areas in adult education?

The questions are posed only to highlight the fact that the answers are unknown. It does appear to be time to conduct a comprehensive curriculum needs assessment of the field. This would be helpful to the Adult Education Unit consultants as they steer the developmental work on the curriculum frameworks. And the information can be used to guide long term planning and the allocation of federal funds.

2.4 Key Findings On Curriculum

The previous review of literature and examination of California's past and current efforts in curriculum development point to several key findings:

- **Legislation.** State legislation provides the foundation of adult education curriculum by identifying ten instructional areas that receive public funding in both public schools and community college noncredit. Minimum diploma requirements are also designated.
- **Agency Approval.** Course approval within the funded areas is required by both the California Department of Education and the Chancellor's Office.
- **Competency Based Curriculum.** The need for a competency based curriculum was dramatized by the *Adult Performance Level Study* (**APL**) in 1975. Starting in 1982 CBAE became a requirement in California for local agencies applying for federal grants.

[46] A new CASAS committee is working on learning-how-to-learn competencies, which directly tie in with the higher order thinking skills. *Using Educational Technology to Overcome the Adult Basic Skills Gap: California's Experience and Prospects*, a study by Micro Methods of Berkeley, identifies specific workforce skills needed for both entry level employment and career mobility (see page 9).

- **Curriculum Projects.** Utilizing federal funds, the APL study spawned major competency based, life skill oriented curriculum and assessment projects in the 1970's and 1980's.
- **Curriculum Frameworks.** The Adult Education Unit has begun work on developing curriculum frameworks for each of the ten authorized areas.
- **Local Contributions.** Local agencies have made and shared major curriculum contributions through the years as they have met the challenges of an ever changing social milieu.
- **Commercial Success.** The quality of curriculum materials developed by projects, local agencies, and individual instructors in California is verified by the large number of them which have achieved success as commercial publications.
- **Dissemination.** Dissemination of exemplary programs, practices, and materials is to be facilitated through an electronic communication system.
- **Current Needs.** Development of software appropriate for adult learners is a high priority. A survey of local agencies is needed to identify other areas of concern.

Chapter 3
Educational Technology

"What if the computer were like a pencil? Imagine a school that only had 30 pencils they kept in a special room, and students were only allowed to use them once a week."[1]

From the slate chalkboards . . . of the one room school house in the rural America of bygone days to the multimedia learning laboratories of today's most electronically advanced classrooms, the struggle for educators to keep pace with "state-of-the-art" technology has been a constant one.

The decade of the 1980's has been referred to as one of self aggrandizement, consumption, political conservatism on the home front, and tremendous economic and social upheaval on the world scene. Whatever else it may or may not have been, it has been a decade of rapidly expanding technology at work, at home and, finally, at school.

From the slate chalk boards and gelatin "ditto" pans of the one room school house in the rural America of bygone days to the multimedia learning laboratories of today's most electronically advanced classrooms, the struggle for educators to keep pace with "state-of-the-art" technology has been a constant one.

This chapter will examine educational technology in terms of:

- Background
- Current Status
- Other Considerations and Needs

Utilization of technology in adult education classrooms is still at a lower level of implementation than in the youth programs. The shortcomings of both the financial and personnel structures of the adult education system undoubtedly contribute to that.

3.1 Background

The ditto machine, the slide or movie projector, the typewriter, the calculator—yesterday's innovations—hardly come to mind when "educational technology" is discussed

[1] Alan Kay, Keynote Address, Association of California School Administrators Conference, Santa Clara, April, 1990.

today. Rather computers, LANs, computers, laserdiscs, computers, interactive video, computers, VCRs, computers, digitized sound, computers, camcorders, and—oh, yes—computers are the classroom technologies of choice today.

The above listing is barely an exaggeration. Although educational technology is multi-faceted, when the term is employed the most common response is in terms of computer usage. Perhaps that is because they are the most common of today's efforts to employ technology in the schools. Perhaps that is because they can be used in conjunction with other technologies to expand their versatility. Whatever the reason, there is more to using educational technology than buying a computer and plugging it into the wall socket. The background review of educational technology will include:

- General Use and Rapid Growth
- Technology In the Classroom
- Criteria for Selection
- Technology and Instruction
- Technology as Curricular Support

At the conclusion of this section the reader should have conversational acquaintance with the most common and promising of today's educational technologies

GENERAL USE AND RAPID GROWTH

Use of the video cassette recorder (VCR) and videotapes has been seen in the classroom for a number of years, although video production as a learning tool is not a common practice. Classroom use of the computer is growing at a rapid pace. Use of the laserdisc, interactive video, and multi-media presentations is still rare. Distance learning, primarily in the form of television courses, has been employed at the high school and college levels for a number of years. However, it is not eligible for reimbursement through apportionment for adult education in California. Moreover, it is difficult to track rates of technology usage. The studies that have been done focused on classrooms for youth or higher education. There are no accurate profiles of technology usage for adult education.[2] That being said, it can be useful to look at utilization rates in other segments of public education, bearing in mind that it is safe to assume that adult classrooms lag well behind.

[2] Micro Methods, Draft of *Using Educational Technology to Overcome the Adult Basic Skills Gap: California's Experience and Prospects*, Berkeley, December 1989. This study included eleven adult schools in the 18 in depth profiles of JTPA programs utilizing classroom technology. For the most part, both the hardware and software had been purchased with JTPA funds. Whereas survey results may be generalized, the study did not claim to be representative of all adult programs in California.

Still the exception in 1980, approximately 90 percent of the nation's schools had television sets and VCRs by 1988. Virtually all public school classrooms in California have access to instructional television (ITV) series licensed by the California Department of Education. Some of this access, and it is safe to say most of its use, is by videotape. However, over 3,000,000 students attend schools that are members of California ITV agencies and can receive direct broadcasts. The largest of seven subscription ITV agencies in the state broadcasts over 6,500 hours annually.[3] Actual utilization rates of these services are not known. Some adult education classes would have access to district owned TVs and VCRs even if they do not have their own equipment.

Students from schools in lower socioeconomic areas have significantly less access to computers, and second language speakers have the lowest access of all student groups.

Most television in the classroom is supplemental to core instruction. However, television in combination with other interactive electronic communication, referred to as distance learning, is now being used to deliver direct instruction in at least 35 states.[4] Nationally over 15,000 high school students are receiving such direct instruction through distance learning programs in the 1989-90 school year[5]. Courses taken for credit usually include foreign languages or advanced levels of math or science—classes that frequently do not have sufficient enrollment in small schools—although a broad curriculum is available.

Even though TVs and VCRs still may not be used to the best possible advantage in the classroom, they are commonplace. And, perhaps more importantly, although not a part of equipment in every classroom, one to a room is sufficient. That is not the case with computers.

In 1981 less than 20 percent of the nation's public schools had at least one computer for instructional use. By 1988, with between 1.2 and 1.7 million computers in public schools, that percentage had increased to 95. But access is still poor. That number yields a ratio of approximately one computer for every 30 students. That still doesn't tell the story. There may indeed by one computer in a classroom, but more likely they will be found in clusters in a few classrooms or libraries with the majority of classrooms—and students—having no access. Those students that do use computers do so on an average of a little over an hour a week, about four percent of their instructional time. Students from schools in lower socioeconomic areas have significantly less access to computers, and second language speakers have the lowest

[3] Regional Educational Television Advisory Council (RETAC), Downey, California.

[4] Office of Technology Assessment, ***Power On***, Congress of the United States, Washington, D.C., 1988, page S-4.

[5] Regional Educational Television Advisory Council, ***Televisory***, Downey, California, January/February 1990, page 1.

access of all student groups.[6] A previous study by the Center for the Social Organization of Schools had the same findings with one significant addition: *". . .female students, regardless of social class, spend less time in school on computers than males."*[7]

Videodisc technology is the new kid on the block. Capable of bringing the level of visual sophistication into the classroom that students are familiar with from television, videodiscs, developed 15–20 years ago, have been marketed for educational purposes only since the early 1980's. The videodisc player is connected to a television or video monitor for viewing. Less than 5,000 schools nationwide have purchased the equipment for classroom use.[8]

Do these national averages fit California? Well, yes. In a 1989 press release state Senator Becky Morgan bemoans that standing. *"I'm concerned about the fact that California ranks 27th among all states in the use of computers and computer-related equipment in the classroom. That's not good enough. California cannot be average."*

A spring 1990 *Survey of Educational Technology* (SET) in California supports that average standing. The sample included 481 schools, containing 15,038 classrooms. Based on statewide averages of 27 students per class, approximately 406,026 students attended those schools.[9] Within instructional areas, including classrooms, laboratories, libraries, and portable equipment there were 18,956 computers: 1.26 per instructional area or one per 21.4 students. (Equipment in administrative areas is not included in these figures.) There were 157 computers capable of utilizing CD-ROM programs and 186 laserdisc players. The latter two actually aren't bad if placed in the context of 33 percent and 39 percent of the schools have one each of these more advanced technologies. But the figures are very low indeed if the number of classrooms is considered. There were 748 video cameras or about 1.5 per school.[10]

[6] Office of Technology Assessment, *op. cit.*, pages 5-4–5, based on data from Market Data Retrieval, Inc.; Quality Education Data, Inc.; TALMIS; and *T.H.E. Journal*.

[7] ERIC Clearinghouse on Urban Education, *Digest*, Columbia University, New York, Number 54, 1989, page 1.

[8] Pamela Herber, "Helping Kids Get the Picture," *Principal*, November 1989.

[9] October 1988 CBEDS class size averages were 27.25 for elementary and 27.68 for secondary.

[10] Robert G. Main, Draft, *Survey of Educational Technology*, California Technology Project, California State University, Chico, April 1990, (Question 1). Figures reported from SET throughout this paper are preliminary raw data. In releasing these preliminary figures Dr. Main cautioned that there were a few coding errors which needed to be corrected before a final report could be prepared.

TECHNOLOGY IN THE CLASSROOM

What would be found in the technologically sophisticated classroom? What would it do? The equipment briefly described in this section is illustrative of what is available today.

Television Equipment

The ubiquitous television set is not used as the problem solver it could be in education. Telecommunication, or distance learning, makes instruction available to students in isolated areas. Instructional programs in real time can make the home or nearby site a living classroom by using the telephone to give the distant learner direct access to the instructor. It is more commonly used for special events (a Presidential speech during a citizenship class, for example) or in combination with a VCR to watch previously recorded videotapes.

There are two examples of television being used for direct adult level instruction which warrant attention. Both consist of broadcast only, with no interactive components. Kentucky Public Television developed a General Educational Development (GED) test preparation series which is aired on a repeated basis on public television stations throughout the country.

In Los Angeles, with some 40,000 potential students being turned away from full ESL classes in 1986–1987, the Board of Education directed the adult division to prepare a series of lessons for broadcast twice daily on the district's own educational television channel. The result was ***Learning English***, a series of 80 half-hour lessons built around 20 life skill topics, at the high beginning level. The lessons, taped without rehearsal or editing, with an in-studio "class" of five students, display the spontaneity and interactivity of any typical ESL class. The innovative series continues to be aired.

Videotapes are valuable for both supplemental classroom instruction and staff training. With the video camera, and its portable version the camcorder, students or staff can make their own videotapes for classroom use or inservice activities. Whereas the camcorder has carved out a sizeable consumer market for home use, it is the exception rather than the rule to find a video camera in active use in the classroom. Rather, at school it is more common to find this equipment in the audio visual storage room.

Examples of classroom use could include: videotaping and analyzing practice job interviews; videotaping a trip to the supermarket and using the tape as the basis for a language

experience story in an ESL or ABE classroom; or videotaping demonstration dialogs or activities for ESL. Videotapes to meet local needs can be made. Los Angeles Adult Education made an orientation tape for new and substitute instructors. Sequoia Adult School made a videotape to train ESL instructors in applied performance testing. These were not sophisticated productions: point and shoot would be a better descriptor. Where better equipment and the technical know-how is available broadcast quality tapes are the result. Teacher training tapes for the CBAE Staff Development project and the ESL Teacher Institute were produced by the Corrections Division of Hacienda La Puente Adult Education. That division produces short videos for local instruction on an ongoing basis (see page 56).

Videodisc Equipment

The videodisc, sometimes called a laserdisc, is relatively new technology, rarely found in schools today. It makes possible the recording of a tremendous amount of material in a small space. A videodisc looks like a phonograph record with a shiny silver colored surface. It requires a videodisc player, again comparable to a phonograph. In place of a phonograph needle, the disc is "played" with a laser beam. The player is connected to a television set or monitor for viewing. Some discs have two sound tracks, making bilingual audio available, with one track being received through headsets while the other is broadcast.

Most standard size videodiscs contain 54,000 images per side, or about 30 minutes of viewing if played straight through. These can be a combination of single frame "slides" and movie clips. Videodiscs are available in two formats. Extended play discs run 60 minutes per side. Both formats can be played on the same machine.

Random access—jumping from one part of the disc to another instantaneously (no rewinding nor fast forwarding) by means of a remote control—puts any one of those 54,000 images (or starting point for movie clips) at the instructor's fingertips. Control features make it possible to stop motion, freeze a frame, advance one frame at a time, change pace to slow motion, or repeat a sequence any number of times.

To become "interactive," add a computer with the appropriate software to the videodisc setup. This combination can produce simulated environments in which the videodisc is manipulated through computer commands. Thus, one can have the action of a television program with the control and feedback capabilities of a computer. Scenarios can be presented from the videodisc and a corresponding problem or course of action is presented by the computer program. The student can determine what happens next by giving a computer

command and then seeing the results of that decision played out on the screen.

Most educational videodiscs come with sample lesson plans that demonstrate how to use different segments of the disc to meet different instructional objectives. All have an index of access numbers to the frames or sequences contained on the disc.

"Compact" Technology

Like videodiscs, Compact Disc-Read Only Memory (**CD-ROM**) technology is readily available today, but again is not widely used in the schools. This computer software is probably best known for its ability to store huge amounts of information (text, graphics, audio or animation) on one small disk. It is usually used for reference (encyclopedias, almanacs, etc.) only and not for direct instructional activities.

Compact Disc Interactive (**CD-I**) is an extension of CD-ROM technology. Rather than working with a computer, it is played on a compact disc player, is viewed on a TV screen, and is controlled with a mouse or other remote device. CD-I stores still pictures, graphics, text and sound, but no video. It is still very expensive and not feasible for school acquisition on any significant scale.

Another extension of CD technology still in the developmental stage is Digital Video Interactive (**DVI**). It is capable of storing large amounts of video, along with text, graphics and sound, that can be viewed and manipulated directly on a computer. This technology will eliminate the necessity of other hardware for multi-media capabilities.

The key to these new technologies is the digitized signal, an advance in both reproductive integrity and storage capacity over the analog signal that has been used to transmit both video and sound. ***Power On*** explains:

> The difference between analog and digital technology is perhaps easiest to understand through a simplified description of phonograph records and compact discs (CDs). With phonograph records, sound is picked up by a microphone that transforms sound waves into electronic waves. The electronic waves are impressed on the record in the form of fluctuations in the amplitude of the groove. When the record is played, these vibrations are sensed by a stylus (or needle) that sets up similar vibrations in the amplifier and then in the cone of a loudspeaker. The loudspeaker pushes the air and transfers the same vibrations to the ear.
>
> With digital CD technology, the sound is taken from the microphone into a processor, broken up into miniscule entities of time, and analyzed and converted into on/off pulses. In computer

terms, these on/off pulses are ones and zeros that are encoded onto the CD. This is called analog-to-digital conversion. When a laser beam scans the tracks of the CD it sends these ones and zeros to another processor which interprets them as discrete increments of sound and creates a new wave form out of them. This is called digital-to-analog conversion, and the resulting signal drives the speaker to reproduce the sound.

The trouble with analog signals is that they lose their strength and acquire noise as they pass through a medium (such as wire), just as sound does as it travels through the air. Moreover, each time a signal is copied it also loses fidelity. The advantage of digital technology is that after signals have been converted to on/off pulses, even though the strength of the signal may deteriorate, as long as the receiver of the information can distinguish on from off, it can reproduce the original information exactly. Therefore, no loss of fidelity will occur when digital messages are transmitted or copied. This means that each copy will be equal to the original and transmissions of information can be made with little or no degradation.

All of these "compact" technologies require less equipment than the current interactive videodisc or other multimedia configurations and have the capability of approximately the same end result. Thus, once they move from the developmental to the marketing phase, and prices drop, they should command strong interest on the part of educators.

Computer Equipment

Computers are no longer a novelty. As indicated previously, the rate of acquisition and use of computers in the classroom is accelerating rapidly. But since access to computers is highly uneven there is still a majority of students and staff who know little to nothing about operating them. Evidence of this is found in a 1989 survey by the California Technology Project. Of the instructors responding to the survey 38.3 percent ranked themselves unskilled in computer competency, with an additional 30.7 percent characterizing themselves as having limited proficiency.

Computer technology has its own vocabulary that can become quite complex and foreboding to the uninitiated. Fortunately, just as one does not have to understand the names and the purpose of all of the parts of an automobile in order to drive one, neither is it necessary to understand the bulk of computer-ese to use one.

The novice may well think of the computer as the keyboard and the display screen, also called a monitor, because that is what the user manipulates and sees. The true computer, however, is the central processing unit (**CPU**)—the "box" that contains all of the electronic connections that house and store information and make it possible to manipulate that

Since access to computers is highly uneven there is still a majority of students and staff who know little to nothing about operating them. . . Of the instructors responding to [a] survey 38.3 percent ranked themselves unskilled in computer competency, with an additional 30.7 percent characterizing themselves as having limited proficiency.

information. Some computer setups can become quite elaborate, but they all contain those three basic components: an input device, the CPU, and a means for output.

In addition to a keyboard, input can be achieved with a scanner or a mouse (a hand manipulated, external remote control which directs an electronic pointer to symbols on the screen, which in turn activates computer commands). The technology is now available for sensor initiated input as well. Thus, one can touch the screen or give vocal directions to initiate commands. Touch screen technology is more highly developed than audio. However, both of these input capabilities hold great potential for those with special learning needs.

Computer output can be directed to the screen, a printer, another computer, a television monitor, a unit for wall projection, a modem for transmission to other locations, or a speaker.

The computer program, also called software, controls the work of the computer. It determines what the computer does, based on the directions or commands the user inputs through the keyboard or other device.

Oral/Aural Capabilities

Some computer programs can be heard as well as seen. Most audio output to date has been synthesized speech, somewhat grating to the ear and not always easy to understand. Now digitized sound is available, a technology that produces natural sounding voice. An aural component can be especially helpful to material for low level reading or ESL instruction. Combining the capability of spoken commands and verbal responses makes the computer even more viable as a tutoring aide for beginning level students or for those with disabilities.

To Network or Not

Computers can be used in all kinds of configurations. A stand-alone is just that. It is not connected to anything else, except probably a printer. Each stand-alone computer must have its own software in order to operate. The advantages of using stand-alones include generally lower costs and flexibility. Depending on instructional goals, a computer lab could contain more than one brand so that students can become familiar with multiple types and their specialized application programs. It is easy to add units as the need and budget allow. Disadvantages to using a group of stand-alones include the requirement of multiple copies of software. The floppy disks on which these programs are stored also require careful handling. Stand-alones negate the capability of computers for

facilitating record keeping. There is generally no specialized training provided with single purchases. The instructor or lab manager becomes the *de facto* technician with no backup resources.

There are various kinds of networked computers where a group of computers are connected to a central file server. Networked units can share software through the file server, which is a "master" computer with extra large storage capacity capable of serving the entire network. All software is loaded onto the file server and can be accessed by any unit on the network.

Some networks are accessed through telephone connections to a central software library located elsewhere. Others are local area networks (**LANs**) serving one location. Networked systems have the advantages of cost savings in software, ease of student use (no disk handling, etc.), and the capability of using class record keeping systems. Sometimes, the individual stations can still be used as stand-alones if desired. Equipment can be added to a network as needed. Disadvantages of networked computers include the cost of technical expertise needed to install and service the network. In addition, not all software has network capabilities, and more training is required to handle the management systems.

Integrated Learning Systems

There are further divisions within networked systems. With a local area network instructors can select individual, separate programs to meet locally determined curriculum objectives. This entails the review of sufficient software to find the "right" program to deliver instruction at the right level of difficulty. It cannot be denied that this is a formidable task. Because of this and because of the scarcity of adult appropriate software there is great attraction for prepackaged instructional systems, referred to as integrated learning systems. These come complete with record keeping systems, pre and post tests, assignments at the appropriate level based on test results, and an extensive, sophisticated software library. Some of these systems come with print material as well as the computer software. Vendors of these systems generally provide staff training and have backup resources for the instructors. The systems tend to be popular with the instructors who manage their use. However, these systems cost more to acquire and have an annual license fee for software.

Integrated learning systems have both their supporters and detractors. One enthusiastic administrator was preparing to establish a second laboratory utilizing a well known integrated system. She praised the organization and depth of the curriculum, indicated that the materials involved the students and were not just a textbook on the screen, commented on the

soundness of the writing instruction, and that students liked the books which accompanied the system.

Another administrator went the route of local area networks with instructor selected software. The cost of employing a consultant, networking five computerized learning centers, purchasing software and training staff was about half of the price of the more elaborate integrated systems. Moreover, new software can be added to the system at any time. Some of the integrated systems allow the use of supplemental software (some do not), but none of it can become a part of the classroom management system.

Criteria for Selection

Software availability and desirability are the major considerations in the determination of what kind of computers to buy.

Software availability and desirability are the major considerations in the determination of what kind of computers to buy. Returning to the automobile analogy, any brand of motor oil, gasoline, tires or battery can be used to operate a car. Not so with computers and software. Computer programs can be used on only the designated brand or type of computer. That is, software designed for Apple II series or Apple Macintosh computers cannot be used on IBM (or IBM compatibles, of which there are many) and vice versa.[11] Some software companies develop programs, which appear identical to the user but are electronically different, for more than one type of computer. Other programs are available for only one type.

Thus, software capabilities become the guiding factor in the selection of equipment. So how does one select software? Carefully. The paucity of adult appropriate software has already been commented upon. There are guides available to help with screening different programs. One needs to keep in mind, however, that these guides can only review what is in existence. As noted, most educational software on the market today has been developed for children and youth. Thus, a listing in one of these guides can mean anything from being good for adults to being the least objectionable of what is available.

What is the purpose or objective of the instruction? The quality of software for basic skills instruction may be very different from that which would be used in an office practice or other vocational class. Is there a match between instructional objectives and the software? Are the directions on the software easy to follow or will it require a lot of teacher time to lead the student through it? Does the software have authoring or other open ended capabilities? Is that needed? Are graphics

[11] The problem of software compatibility is slowly being resolved. By a variety of methods, Apple Macintosh computers can now be made to run software developed for IBM (and compatible) computers. An enhancement from a third-party vendor soon will allow IBM (and compatible) computers to run Apple II software. These methods offer a high (if not total) degree of compatibility.

suitable? Does the content challenge? These are some of the questions that need to be considered in selecting software. A software evaluation form and a listing of software guides are in **Appendix F**.

With the dominant role that software selection should play in the what-computer-to-buy decision, one would expect to find heavy instructor involvement in the total process. The Micro Methods study, however, found that those decisions were made only by administrators in 25 percent of the study sites. Resource or instructional personnel were included to varying degrees in the balance, with the administrator retaining the primary role.[12] Only half of the sites reported local curricular considerations in their selection of technological systems.[13]

Educational software is available for the various models from the major computer companies. Once the core of the software library has been determined, attention can be turned to the equipment itself. The two remain intertwined.

"*Any book written about how to buy computers would be out of date by the time it appeared.*"[14] However, in addition to the "software first" rule of thumb, other broad guidelines can be offered. Price should not be the major criterion. Plan for the future; plan for expansion. These usually mean acquire the top-of-the-line that meets your need (basic skills instruction, office skills, desktop publishing, data management, multi-media control, etc.). "Bargains" may indicate that the model being offered does not have sufficient storage capacity to handle new software.[15] A bargain today may mean inadequate equipment a year from now. Planning for the future entails acquiring systems that can be expanded as the need arises. Be picky about the keyboards and screens. Those are on the front line for users and they need to be comfortable. Don't economize on printers if any production work is expected. Be comfortable with your vendor. Is phone help and other trouble shooting support available after purchase? Seek help. If a technology advisor is not available through the local agency, try the county Office of Education—or hire one. These are major decisions and can be expensive ones if the wrong path is chosen.

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[12] This may well reflect the part time status of most instructors as much as administrator dominance. Frequently administrators are the only full time personnel and thus the only ones available to take on planning activities.

[13] Micro Methods, *op. cit.*, page 40.

[14] Kathleen Sullivan, "A PC Buyer's Guide," *San Francisco Examiner*, February 25, 1990, page D-1.

[15] Software is requiring more storage capability because of increased use of graphics. The newer compact technologies also require larger storage capacity.

TECHNOLOGY AND INSTRUCTION

Instruction remains the focus of classroom activity . . . With all of the attention being directed to educational technology now, one may need to be reminded that . . . the technology itself is not the object of instruction—rather it is a means to an end.

Instruction remains the focus of classroom activity or other learning environments. Historically, instructors have utilized many methods, materials and instructional aids in their work. Computers and other electronic technologies add to that repertoire. With all of the attention being directed to educational technology now, one may need to be reminded that for most students the technology itself is not the object of instruction—rather it is a means to an end. Alan Kay asserted that computers should be used like paper, which would eliminate all computer-directed curriculum. "*We don't direct curriculum at paper,*" he said. Computers in the classroom will reach their full potential only "*. . . when you don't know they're there.*"[16]

Current Practices

So, how does technology contribute to achieving instructional objectives? A California Postsecondary Education Commission report paints the broad picture.

> Since the new technologies—including the computer, telecommunications media, laserdiscs, computer compact disks (CD-ROM), and combinations of these and other technologies—are vastly extending the variety of ways we can teach and learn, they are therefore beneficial to students with a wide range of special needs. They allow students to retrieve and combine collections of data, pictures, or sound; to observe phenomena that would be difficult or impossible to observe in real life or in the laboratory: to decide at what level of difficulty to become involved with a given subject and to receive computer-based coaching and practice; to gain experiences that will be useful in the increasingly high-tech working world; and, for those far removed from the physical classroom, to participate as if they were there. In these and other ways, the new technologies can alleviate barriers of distance, disability, language, age, and economic condition. By providing a sense of increased personal power and by incorporating a spirit of play and discovery, they can also enliven the learning experience for everyone, especially, it is to be hoped, for those whose interests are not now being engaged by traditional methods of instruction.[17]

A Congressional Office of Technology Assessment research project on educational uses of technology is more specific in identifying several types of contributions. Although the study dealt primarily with computer usage, one can assume that there is some generalization to the other interactive technologies (many of which utilize computers themselves).[18] Findings included:

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[16] Alan Kay, *op. cit.*

[17] California Postsecondary Education Commission, *Technology and the Future of Education*, Sacramento, 1989, page 1.

[18] Office of Technology Assessment, *op. cit*, pages 9–10.

- **Drill and practice.** Drill and practice to master basic skills is the oldest and probably still the most common, if not the most effective, use of computers.
- **Development of writing skills.** Word processing *per se* does not make better writers. OTA reports evidence, however, that by easing the process of critiquing and revising their work that students have made significant gains in writing ability.
- **Problem solving.** There is some evidence that working with simulations, educational games and data bases helps students identify component parts of a problem and possible solutions.
- **Development of abstract concepts.** Math, science, and social studies concepts can be demonstrated, manipulated, and tested through simulations.
- **Data manipulation.** Database management encourages students to examine information by breaking it into component parts, reorganizing it and reporting results, thus enhancing general information processing skills.
- **Skills for general purposes or vocational training.** Keyboarding and skills in computer applications prepare students for an increasingly technological environment at home and at work.
- **Access for special needs.** Technology is particularly liberating for those with speech, hearing, neurological or other conditions requiring special education. A student can "speak" through synthesized or digitized speech or "write" into the computer even if they can't hold a pencil.
- **Access for the isolated.** Interactive distance learning can deliver instruction to remote or small schools.
- **Individualized learning.** Machine based instruction makes it possible to prescribe materials that adjust to a students' current knowledge, rate of learning, and even learning styles. Material can be as simple or complex as the student is capable of handling.
- **Cooperative learning.** Simulations and problem solving software encourage cooperative learning. On an electronic network students from different locations can work on joint projects or common problems.

Developmental writing, problem solving, conceptualization, data management, and cooperative learning activities all contribute to the development of higher order thinking skills.

Developmental writing, problem solving, conceptualization, data management, and cooperative learning activities all contribute to the development of higher order thinking skills.

All of the broad categories have direct application for adult students in elementary or secondary basic skill classes. Some specific applications for video in ABE and ESL were given on page 38. Those same scenarios are applicable for any interactive technology. In addition, interactive simulations would be an exciting enhancement in vocational training programs as well as creating ideal situations for applied performance assessment.

Machine based learning activities can be supplemental to other instruction or they can become the primary means of delivery. Most educators are familiar with the terminology computer assisted instruction (**CAI**). This is the "low" end of the scale, where computer programs are used as tutorials or enrichment and are strictly supplemental to classroom instruction. Computer based instruction (**CBI**) shifts the emphasis to the computer for presenting the bulk of the lessons. The instructor selects the assigned programs, provides assistance and supplemental materials as needed, and assesses student progress. Still more reliant on the computer is computer managed instruction (**CMI**). The previous discussion of integrated learning systems gives an example of CMI. Pre testing, determination of level of materials, primary instruction, post testing, and assignment to the next, progressively higher instructional unit are all managed by the computer. The teacher trouble shoots, coaches, and gives individualized help as needed.[19] The "C's" in these descriptions could just as easily be "T's" for technology assisted, based or managed instruction.

Whatever equipment is being used, articles, workshop presenters, practitioners, and technicians constantly admonish that technology does not and cannot replace the human touch. It is one more tool in the hands of the instructor, albeit one that delights, expands horizons, challenges and frustrates.

[19] Micro Methods, *op. cit.* pages 27, 32.

Practitioners... constantly admonish that technology does not and cannot replace the human touch. It is one more tool in the hands of the instructor, albeit one that delights, expands horizons, challenges and frustrates.

Effectiveness

Where technology has been introduced into the classroom both teachers and students report positive outcomes. However, there is a dearth of hard evaluation data.

Rapid growth and recent implementation "*...raises a problem in assessing effectiveness of technology...Identification of strengths, weaknesses, and effectiveness can only be conducted in a very general way.*"[20] California's new *Educational Technology Act* has set aside $400,000 for an evaluation study to assess the impact of the state's technology programs. The evaluation project is scheduled to begin in the fall of 1990.[21] The Congressional Office of Technology Assessment (OTA) reports:

> The need for studies evaluating different approaches continues. Research has covered some areas more than others, and missed some areas entirely. For example, there has been some research on the cost-effectiveness of traditional CAI, finding it appropriate under specific conditions. But effectiveness assessments of newer applications of technology are needed, as are longitudinal studies that follow groups of users over time. This kind of school based research is difficult and costly. Better data and sophisticated tools are needed to measure cost-effectiveness, and it is difficult to gather detailed administrative data, apply economic considerations, measure effects, and account for social and institutional variables. Most school districts and states do not have resources to conduct such research and evaluation. Federal research should ... study ... both the educational effectiveness and cost-effectiveness of currently available technologies.[22]

In July 1990 the OTA was authorized to conduct a two-year study on the impact of technology on adult literacy.

At the state level the Micro Methods study concurs in the need for research:

> Examples of effectiveness include (1) more rapid cognitive gain than with conventional modes of instruction and (2) more complete mastery of the competencies taught. This study has not been able to obtain objective measures of effectiveness—this would require a controlled experiment. However, administrative, resource, and instructional personnel at all the case study sites, without exception, stated that their uses of educational technology were increasing the effectiveness of the instructional delivery for ABE and ESL students.[23]

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[20] Micro Methods, *ibid.*, page 14.

[21] Frank Wallace, "What's New from SDE," *Computer Using Educators Newsletter*, May 1990, page 21.

[22] Office of Technology Assessment, *op. cit.* pages S-13-14.

[23] Micro Methods, *op. cit.*, page 46.

Given the absence of hard evaluation data, observations and reports from instructors and students reveal the general acceptance of and enthusiasm for technology in the educational setting. For example, selected subjective study findings on the effects of technology from the Micro Methods report include:

Increasing use of technology will accelerate the changing role of the instructor and the learning environment. . . Classroom management [has become] an art.

- Enhancement of self esteem
  - student controls own learning
  - non-judgmental
  - sense of mastery
- Increased flexibility in instructional delivery
- Increased motivation
- Computer literacy; benefit from exposure to technology
- Immediate and neutral feedback
- Addresses wide range of learning styles
- Affordability and cost-effectiveness
- Effective with high risk populations
- Promotes increased individualization
  - self pacing
  - broad content availability
  - correct level of instruction
- Integrated management systems facilitate accountability.[24]

The Instructor's Role

Increasing use of technology will accelerate the changing role of the instructor and the learning environment. As the individualized, multi-level, multi-subject learning laboratories replaced the more traditional reading, math, and social studies classes over the past decade, the instructor's role changed to that of a facilitator. Classroom management became an art as the instructor orchestrated small group lessons, cooperative learning activities, individualized work, and matching aides or volunteer tutors to those who needed one-on-one instruction. When computers were introduced into those laboratories, they gave the instructor another tool. With the approval of funding for independent study in adult education, undoubtedly the instructionally networked computer, accessed through a modem, will start showing up at home or at work. The classroom instructor's orchestrations will then include a manager of distance learning as well.

[24] Micro Methods, *ibid.*, pages 20-23, 47.

Curricular Support

The computer's storage and sorting capabilities, the electronic communication system to network educators across the state, student record management systems, and demonstrations of specific instructional techniques with opportunity for interactive practice and feedback can combine to provide unprecedented support to the individual instructor.

Time will come when the CASAS ***Curriculum Matrix and Index*** will be accessible by computer. Instructors can flag the materials they have found most useful. A competency code number can be entered into a computer and sample lesson plans at varying difficulty levels can be recalled. All of this assumes, of course, that the material has been entered into the data bank. Scanning devices make this feasible and will, undoubtedly, someday become standard equipment in local agencies.

These capabilities are present today. What is missing is sufficient funding, sufficient equipment, software targeted to adult education's needs, planning, training, time, and more planning, training and time.

The discussion of the curriculum forum on the electronic communication system suggested ways that system can support curriculum work (**page 27**).

In many instances the record keeping involved in tracking individual student competencies has been the bane of full implementation of competency based education. If paper and pencil assessment were replaced with computer based assessment—or even if scannable answer sheets were uniformly used—and if applied performance assessment took place within the context of computer linked laserdisc simulations, student tracking by competency would become automatic. We see this today in the detailed student records that accompany integrated learning systems.

Additional support can be provided through expert systems software. The term "expert systems" or "artificial intelligence" is applied to software programs that make it possible for computers to emulate human reasoning. Starting with technical background and documentation provided by experienced personnel, the expert program provides analysis of new information and makes recommendations, gives advice, and provides explanations. For example, given historical student achievement patterns and programs options (documentation of background data) new student demographics and placement or diagnostic information (new information for analysis), the expert system could produce an individualized educational plan (recommendation). Or group information could be analyzed to suggest appropriate materials to use in a multi-level, multi-ethnic class.

There is nothing new here. These capabilities are present today. What is missing is sufficient funding, sufficient equipment, software targeted to adult education's needs,

planning, training, time, and more planning, training and time. The latter are, perhaps, the greatest obstacles.

3.2 Current Status

Some information is available about the status of technology in California public schools, but no accurate information exists for adult education agencies. The *Farr-Morgan-Quackenbush Educational Technology Act of 1989*, also known as *Assembly Bill 1470*, provides the specific framework for K–12 local planning and implementation of technology. It further calls for a master plan for all segments of public education in California. The first steps toward coordinating technological planning and implementation for adult education are found in the newly established Outreach and Technical Assistance Network (OTAN). It will be instructive, therefore, to look at these three aspects of educational technology in California:

- Educational Technology Act
- Local Adult Agencies
- Role of OTAN

There is no separate legislation on technology targeted specifically for community colleges. Postsecondary schools are included within the purview of portions of the *Educational Technology Act.*

EDUCATIONAL TECHNOLOGY ACT

There is a concerted and well-funded effort to install technology in the mainstream K–12 public schools. The California Department of Education has an Office of Educational Technology that oversees the Educational Technology Local Assistance Program, established in 1983 by *AB 803*. The *Farr-Morgan-Quackenbush Educational Technology Act* of 1989 continues and expands those initiatives.

Model Technology Schools

The elite projects of this initiative are the six Model Technology Schools (**MTS**) funded at $500,000 per year for five years. School year 1989–90 was the third year of these projects. These six Model I complexes are located in Alhambra, Cupertino/Fremont, Los Angeles, Monterey, Port

Hueneme, and Sacramento.[25] All projects started at the elementary level with implementation for high schools, targeted for the third year. The latter may have some direct application for adult level programs.

Local Planning

Each local agency developed its own implementation plan, and there is considerable variation in the approaches. Some emphasize equipment, training, and strategies for expanding instructor resources as a starting point; others emphasize immediate student use of a broad range of equipment. Some start with implementation across the broad curriculum; others concentrate on one curriculum area at a time. All operated on a locally developed plan. All stress the importance of strong staff development activities, both initially and on an ongoing basis.

Parent Components

Of particular interest to adult educators is Alhambra's practice of sending computers home. One elementary school makes fifteen computer setups and software available for general circulation to students' parents.

There are provisions for parent components in the MTS plans, although most are not as yet fully developed. Of particular interest to adult educators is Alhambra's practice of sending computers home. One elementary school makes fifteen computer setups and software available for general circulation to students' parents. To be eligible to take a computer home, the adult must attend at least one introductory class. Most take advantage of additional instruction, which is offered in English, Spanish or Cantonese. Checkout is for a week. If there is not a waiting list, the time can be extended. With approximately 350 families in the school, each family can count on having a computer at least one week a year.

Starting January 1990, another fifteen computers with modems were made available for student and parent use in the home. Those fifteen go to students/families in the same class. An electronic bulletin board links the computers so that parents and students can access each other and the instructor during non school time. The student/parent groups are rotated periodically.

Home use of computers is also available to Alhambra's high school juniors—and, thus, their parents—in advanced placement English and history classes. Eighty-six laptop computers have been checked out to this group. They are carried to class for notetaking and then home to, again, remain "connected" through modems and bulletin boards. The students have assigned group projects and can communicate

[25] There were also six Model II schools which were two year projects funded at $80,000 per year to implement technology within a designated subject framework. These will soon be ready for dissemination.

both with their team members and instructors outside of classroom hours.

The remarkable part of these checkout programs is that within three years only one cable has been lost. It would appear that the potential for checking out computers for home instruction for adults has been established.[26]

Technology Act Highlights

The Act is a comprehensive one containing many provisions, some of major dimensions, some not so broad in scope. In addition to the Model Technology Schools, the software development partnerships **(see page 30)**, and instructional television licenses **(see page 36)** previously discussed in this paper, there are several components that may be instructive to adult educators as they accelerate planning and implementation of technology in adult delivery systems.

- **Planning Grants.** A new round of planning grants are being awarded in the spring of 1990. From 1984–88, $53,630,330 were distributed in grants ranging from $8,000–$24,000 for planning and expansion of technology. The emphasis is on the completion of school and district level technology plans.
- **California Technology Project.** The California Technology Project (**CTP**) is operated under a contract with the California State University Chancellor's Office. Operating through regional consortia, CTP assists with needs assessments and local planning, facilitates delivery of staff development, works with the Model Technology Schools, operates an electronic communication system (**CSU-Net**) and collects and analyzes data. The *Survey of Educational Technology* (**SET**) that is referenced throughout this report was conducted by CTP.
- **Video and Software Clearinghouses.** These are separate clearinghouses established to identify video titles and computer software that are aligned with state curriculum frameworks. Their publications are the ***Educational Software Preview Guide*** and the ***California Index of Instructional Video***, accessible through county offices of education if local agency audio visual or technological services do not have them.

[26] Dr. Gary Carnow, Director, Alhambra Model Technology School Project, telephone conversation, December, 1989.

- **California Planning Commission for Educational Technology.** The Commission is charged:

> Prior to January 1, 1992, develop . . . a state master plan for educational technology, including priorities to guide the use and integration of educational technology in the public elementary, secondary, and postsecondary schools, taking into account and building upon existing district, regional, and statewide plans. The plan shall be presented to the Legislature, the Governor, the State Board of Education, the Superintendent of Public Instruction, the Board of Governors of the California Community Colleges, the Board of Trustees of the California State University, the Regents of the University of California and the California Postsecondary Education Commission.

A major emphasis of the plan is to be the coordination of educational technology activity in and across the various educational segments. Other points to be addressed include:

  - funding
  - identification of critical problems and unmet educational needs that might be addressed through technology
  - increased capacity and efficiency of telecommunications
  - programs to provide skills in operating and creating new technologies
  - evaluation and accountability
  - gathering and disseminating current information
  - a strategy to implement the Master Plan

- **Educational Technology Committee.** This Committee advises the State Superintendent of Public Instruction and the State Board of Education. The scope of its deliberations will include:

  - funding levels
  - current developments and educational applications of information technologies
  - allocation of grants for software research and development, demonstration schools, local adoption/adaption plans, postsecondary institutions, and regional consortia
  - equal pupil access

- coordination between software/hardware companies, vendors, and school site personnel
- securing private sector involvement in public school programs
- evaluation criteria for technology programs
- teacher preparation programs
- advising the Commission regarding the State Master Plan for Educational Technology

Implication of the Act for Adult Education

Both the Commission and the Committee were established by the 1989 law and will begin work during the spring of 1990. Membership on the two bodies was highly prescribed, with slots designated to represent different educational segments and governing bodies, professional organizations, students, business, and the public. Although both the public school system and community colleges have representatives, there is no representative from adult or noncredit education. Attempts to secure the "public" slots for adult education representation were not successful.

Both the Commission and the Committee will have major impact on the direction and level of technological implementation in the state's public schools . . . Adult educators need to monitor their work and educate the members to the needs of adult education programs.

The Commission, the Committee and the local planning grants all emphasize the need for an organized approach to implementing technology in the schools. The need for a technology plan is apparent from figures reported in the *Survey of Educational Technology* (SET). A school plan influenced only 14 percent of equipment purchases. Another 24 percent of the equipment purchases was recommended by school or district committees. Department chairs or individual teachers are the largest group of decision makers with 32 percent. District or school technology specialists account for 24 percent. Vendors or "other" make up the balance. Even allowing for committees and specialists operating on an informal plan, more than a third of equipment purchases appear to be acquired without coordinating total resources. Such an informal approach may prove to be expensive in the long run.[27]

Both the Commission and the Committee will have major impact on the direction and level of technological implementation in the state's public schools in the years to come. Adult educators need to monitor their work and educate the members to the needs of adult education programs.

[27] California Technology Project, *op. cit.* (Question 19).

LOCAL ADULT AGENCIES

There is practically no information available reflecting utilization of computers or other technology in adult education in California—or anywhere in the nation, for that matter. The in-depth case studies of 11 adult agencies included in the Micro Methods study have been alluded to. Those agencies were selected for study because of their use of educational technology and, thus, do not represent a cross section of the state. The Association of California School Administrators (**ACSA**) conducted an informal survey in October, 1989. Twenty one adult school administrators responded. However, that small, self-selected response cannot provide statistically useful information.

Even without adult education data reflecting use of various technologies the knowledgeable observer would note that computer usage in individualized learning laboratories is common, but by no means universal. The highest utilization of computers is undoubtedly in vocational training programs, primarily the various office occupations and desktop publishing.

Contracts for refugee services, JTPA, GAIN, or the Employment Training Panel (**ETP**) have facilitated the acquisition of equipment for many adult agencies. It is also common for equipment to be owned by a "parent" district, either public school or community college, rather than the adult agency. That improves access for the adult education student, but limits the adult agency's role in selecting hardware (and thus software) that best meets its needs.

ROLE OF OTAN

The Outreach and Technical Assistance Network is one of California's special projects funded under Section 353 of Public Law 100-297, as amended, the federal Adult Education Act. The contractor is Hacienda La Puente Unified School District.

Chapter 2 highlighted the OTAN's activities as they impacted dissemination of curriculum materials through regional resource centers, an electronic communication system, and the archiving/retrieving of past project products held by the Adult Education Unit.

The OTAN's responsibilities in the area of technology are of particular importance here. In essence, that project will serve as the bellringer for coaxing, pushing, leading California's adult education agencies into the technological 21st century. It is well suited for the task.

Perhaps the Correctional Education Division under Hacienda La Puente Adult Education is the closest thing to a Model Technology School that exists for the adult level. Unfortunately, it can't be visited because of its location in a locked facility. Nevertheless, they maintain a Media Services Department that includes video producers, computer programmers, and media technicians. With over 125 computers and 40 VCR's, the instructors have a lot of technological support in their individualized program. With instructors developing the content, short, single concept videos are produced for individualized instruction. An average of three of these video lessons are produced a week. Computer authoring programs are used to tailor make what is needed if it is not available commercially. These authoring programs have also been used with videodiscs to make them interactive.[28]

Hacienda La Puente Correctional Education was one of the case study sites included in the Micro Methods report. The case study is presented in its entirety in **Appendix G** to demonstrate the potential of integrating various technologies into the curriculum.

OTAN's activities utilizing or promoting technology are delineated in the project proposal and brochures. Highlights include:

- Provide leadership and framework for strategic planning for use of educational technology at the local level, including minimum guidelines for selection of hardware and software.
  - clarify decision making process in technological planning.
  - encourage teacher involvement in local planning.
  - establish guidelines for the selection of hardware and software with open architecture to accommodate instructional, as well as management, applications.
- Use demonstrations and video to market directly to instructors the benefits of educational technology.
- Establish an electronic communication system for adult education, give training in its use, and encourage participation by all adult agencies.
- Establish an Educational Technology Center to provide hands-on training.

[28] John Fleischman, "School Behind Bars," *Instruction Delivery Systems*, September/October 1989, page 19. Absent the staff of home grown producers and programmers, these techniques can be applied in any setting. Carefully selected commercial software can be used. Locally made videos don't have to be sophisticated, broadcast quality to be effective instructional tools.

Technology must be demystified for instructors. Real change will not occur in the educational setting until this takes place.

- Provide regional training to instructors on appropriate use of technology within a curricular context.
- Develop a technology plan for delivery of instructional services in selected unfunded areas of the state.
- Investigate the use of distance learning in order to increase access to learning opportunities.
- Identify software for computers and emerging technologies, such as interactive video, capable of enriching instruction and stimulating the higher order thinking skills.
- Encourage the commercial development of new software with appropriate content for adults including enhancement of thinking and problem solving skills.

This project has a broad range of responsibilities. Despite limited resources, the potential is great. The project director has emphasized that technology must be demystified for instructors. Real change will not occur in the educational setting until this takes place.

3.3 Other Considerations

This chapter has reviewed the general uses and potential for education of current and emerging technologies. The educational technology bandwagon is certainly rolling. Before everyone can join the parade, however, there are other factors which need to be examined. Among those are:

- A Technology Needs Assessment
- Costs
- Training

These are essential elements of any technological planning project at either the state or local level.

TECHNOLOGY NEEDS ASSESSMENT

You can't get there from here—unless you know where "here" is. The "here" for planning and implementation of technology in adult agencies has not been defined.

A survey adapted from the ones conducted by Micro Methods and the *Survey of Educational Technology* would be instructive. Content could include, but not be limited to:

- Existence of agency technology plans
- Numbers and types of equipment in place
- Types of software utilized
- Curriculum areas addressed
- Priorities for additional curriculum areas
- Staff expertise
- Prioritization of training needs
  - need for initial training
  - need for ongoing inservice
  - need for periodic technical assistance

This needs assessment could be used by the OTAN to plan its staff development, by the Adult Education Institute in implementation plans for the strategic plan, and by the state agencies in developing curriculum frameworks and in allocating both state and federal resources.

The profile that would emerge from this needs assessment could be used by the OTAN to plan its staff development, by the Adult Education Institute in implementation plans for the strategic plan, and by the state agencies in developing curriculum frameworks and in allocating both state and federal resources. Additionally, the information could be submitted to the Commission working on the educational technology master plan for documentation of the needs of adult level instruction.

COSTS

What does it cost to get a foot in the technological door? The Office of Technology Assessment (OTA) estimates the average cost of one computer work station in an integrated learning system to be $3,367 (based on a laboratory of 30 work stations).[29] The Micro Methods study gives a range of from $2,050 to $4,500, yielding a average of $3,275. The low end of that range represents stand-alone computers with locally selected software, and the high end an integrated system, including ongoing licensing costs for the software. Systems utilizing interactive video, audio, text and graphics may run 20–30 percent more. With a five year life span, that would cost out between $55 and $75 per month per work station.[30]

It is an easy trap to think of the expense of educational technologies as the cost of purchasing and installing the hardware along with appropriate software. But costs involve considerably more. Add to the initial cost staff training, maintenance, probably additional personnel (aides to assist students with the mechanics of operation and possibly an in-house maintenance technician as well), ongoing acquisition of

[29] Office of Technology Assessment, *op. cit.*, page 72.

[30] Micro Methods, *op. cit.*, page 56.

software, and perhaps renovation of facilities. Micro Methods estimates these ongoing operational costs at between $60–$178 per month per work station. Note that these costs are higher than the equipment itself. Together, the long term cost range becomes $115–250 per month per work station.[31]

It is an easy trap to think of the expense of educational technologies as the cost of purchasing and installing hardware and software. But costs involve considerably more.

Although some costs remain constant regardless of instructional mode, other costs are relative. How many students use the equipment? Can an instructor handle more students when instruction is supplemented with technological tools? Are instructional objectives achieved at a faster pace? Is retention comparable or better than other methods? How much more does software, which can be shared, cost than other instructional materials which might be consumable? Answers to these questions are difficult to come by, although there are cost-effectiveness analysis models that yield estimates.

One researcher doubts the value of applying these formulas, finding them similar to comparing apples and oranges.

> Comparing programs using technology to traditional curricula rarely yields useful information since new programs have goals attuned to technological change, efficiencies attributable to technology, revised roles for students, and new responsibilities for teachers... In general there are so many differences between the two approaches that comparison is silly. Often, material taught in technologically-based programs simply can't be taught in another way, and therefore is cost-effective by any criteria. For example, flight simulators teach skills in dealing with emergencies that cannot be created in another way... Comparing costs of traditional and technologically-based programs usually fails because the goals and objectives of the programs differ substantially.[32]

The need for control groups, as well as comparison with other alternative instructional strategies, extensive data collection, and the sophisticated analysis required to isolate comparable results is very expensive. Most local agencies do not have the resources for such an extensive evaluation, and few states to date have taken on the task. Because of these difficulties, OTA recommends that the federal government assist in the task of cost-effectiveness analysis by preparing guidelines for data collection and analysis, conducting a demonstration cost-effectiveness study, and funding research on cost-effectiveness methodologies.

The California Postsecondary Education Commission acknowledges the unknown cost-effectiveness but believes educational institutions should proceed to acquire new technology as it becomes available.

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[31] *Ibid.*, page 58.

[32] Office of Technology Assessment, *op. cit.*, page 81, citing Marcia Linn, University of California at Berkeley, Graduate School of Education, "Evaluating Technological Applications to Higher Education: Seeking Promising Paths," monograph, July 1986.

> . . . for the present the Commission does not believe that these technologies hold immediate promise as a cost-effective alternative to traditional educational services for California's students. The costs of implementing these new technologies are likely to be high when they come on-line, at least in the short term. In fact, during the initial phase-in of these technologies, cost per student may be higher than traditional modes of delivery because of the infrastructural investments that will be necessary. These costs will be worth absorbing when the time comes, but it appears that California may still be as much as a decade away from seeing widespread implementation of technologic approaches which hold promise for providing more efficient, but equally effective educational services.[33]

It appears that California may still be as much as a decade away from seeing widespread implementation of technologic approaches which hold promise for providing more efficient, but equally effective educational services.

The motivational and subjective, observable benefits of technology supported instruction, and the increased access made possible through distance learning have been noted. However, there is still much to learn about the total costs and cost-effectiveness of educational technology.

TRAINING

If something was in existence when you were born it's considered part of your environment. Anything developed after birth is new technology.[34] Instructors certainly have to be comfortable with the new technology, their new environment, before it can be used effectively as a teaching tool.

"It's easy," or "It's simple." Nothing can be more frustrating to the novice struggling with beginning technological applications than to hear those phrases. The real generation gap may well be between those comfortable with computers or who can set their home VCR for eight programs in advance, and those who are lost when so confronted. It's a lesson for trainers to keep in mind as they go about their task of bringing California educators' technological skills to the level that is needed for effective instructional purposes. Recall the *Survey of Educational Technology* figures of 38.3 percent of California instructors ranking themselves as unskilled in computer competency and another 30.7 percent reporting limited proficiency.

Training involves both use of equipment plus time to become thoroughly familiar with the content of the software so that it can be assigned effectively for specific purposes. The time to master the equipment, to overcome the psychological barriers, and to become acquainted with the software has been recognized by some.

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[33] ***Higher Education at the Crossroads***, California Postsecondary Education Commission, Sacramento, January, 1990, page 43. This is quoted from a section discussing educational technology " . . . *for the purpose of providing a free-standing alternative to traditional modes of delivering educational services* . . . " to improve student access.

[34] Paraphrased from Alan Kay, *op. cit.*

Training involves both use of equipment plus time to become thoroughly familiar with the content of the software so that it can be assigned effectively for specific purposes.

Members of one school staff were provided computers for home use and intensive training during the spring and summer prior to introducing their use at school. Two hours of inservice each week continue to be offered.[35] The research coordinator for one of the Model Technology Schools asserts that, in addition to pre training and inservice, it takes well over a year of classroom use for the average instructor to become proficient in working with the equipment.[36]

New Hampshire provides funding on a 2:1 matching ratio to local district funds to purchase computers for instructors' personal use at home or at school. When a teacher applies for a computer it comes complete with software, maintenance and initial training. Two week advanced training seminars are offered during the summer. The intent of these efforts is "*. . .to involve a critical mass of teachers who become comfortable in using computers to extend their own productivity. . .*" and "*. . .that these teachers will become trainers of other teachers in their home districts. . .*"[37]

Contrast these approaches with the Micro Methods and OTA findings. Initial training in most of the Micro Methods case study sites ranged from one-half to four days. The longer training periods were generally provided by the vendors of integrated learning systems, who also provide ongoing support for those who license their products. The report concludes that with a few exceptions "*. . .the training provided is probably too short to allow teachers not having hands-on daily experience with it to gain sufficient familiarity to directly address individual skill needs.*"[38]

The OTA 1987 *State Educational Technology Survey* reported, "The vast majority of those now teaching or planning to teach have had little or no computer education or training." It continues: "*. . .only one third of all K–12 teachers have had as much as 10 hours of computer training. And much of this training focused on learning about computers, not learning how to teach with computers.*"[39] These figures combined with the previously cited 1990 California *Survey of Educational Technology* dramatically illustrate the enormous training needs of instructional personnel. There is no reason to believe that California's adult educators are any better prepared than the instructors responding to these surveys.

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[35] Cyndy Everest-Bouch and Gary Peterson, "The Critical Variable When Integrating Technology: Staff Development," workshop session, ACSA Conference, April 7, 1990. Belridge is a one-school, elementary district in California's central valley. In addition to staff members, the 72 students and their families have computers with modems at home as well as at school. They are linked to each other, and to other schools, states, and countries. Parents receive training along with their children.

[36] "State Models for Local Implementation of Educational Technology," panel discussion, ACSA Conference, April 5, 1990.

[37] Office of Technology Assessment, *op. cit.* page S-17.

[38] Micro Methods, *op. cit.*, page 38.

[39] Office of Technology Assessment, *op. cit.*, page S-16.

What kind of training is needed to ensure that "*. . . learning how to teach with computers . . .*" takes place? The OTAN proposal states it well:

*Most technology trainers today do not know how technology applies to the curriculum used. **It is imperative that future teacher training in technology be linked to the curricular context used.***

> Most experts agree that staff development should be focused on the key problems of software usage, *e.g.* integration of courseware into the curriculum. Inservice should be conducted by experienced school staff and other practitioners who have worked with educational technology in an adult education setting.
>
> Most trainers assume that if teachers know how to use a technology, they can use it effectively. This is not the case. Being able to use the technology is a small component of being able to use it to enhance students' learning. The most important factor is that the teacher must become a different and better teacher, which is very difficult to do on a large scale—and which few training programs know how, or even attempt, to do. Most technology trainers today do not know how technology applies to the curriculum with which it will be used. ***It is imperative that future teacher training in technology be linked to the curricular context with which it will be used.***[40]

3.4 Key Findings On Educational Technology

Educational technology holds great potential for improving access and quality of education. The literature reveals that such potential is still a long way from being realized. Key findings include:

- **Uneven Access.** The past decade has seen tremendous growth in use of technologies in the nation's schools. However, equipment to student ratios are high and access is uneven.
- **Computer Priority.** The acquisition of computers has priority as schools strive to integrate technology into the instructional process.
- **Scarcity of Advanced Technologies.** Newer, highly interactive technologies such as laserdiscs and interactive video, which are capable of bringing the world into the classroom and allowing students to manipulate it, are rarely seen in the schools.

[40] OTAN proposal, page 28. This section cites the following sources: Cindy Currence, "Making Effective Educational Use of Advanced Technology," unpublished monograph from National Governors' Conference, 1988, page 27; Micro Methods, *op. cit.*, page 60; Stanley Program, "Policy Recommendations for Developing Appropriate Uses of Technologies in Schools," University of Southern California, page 57.

- **Need Research.** Additional research and evaluation is needed to fully document the effectiveness of educational technology.
- **Educational Technology Act.** California's *Educational Technology Act* provides for the development of Model Technology Schools, development of a master plan, and various planning, evaluation, and dissemination activities.
- **Usage Unknown.** There are no data reflecting utilization rates of technology in adult education agencies.
- **Role of OTAN.** The Outreach and Technical Assistance Network will sponsor activities to assist in the planning and implementation of educational technology.
- **Needs Assessment.** A technology needs assessment of California's adult education agencies is required for accurate planning.
- **Cost-effectiveness Unknown.** True costs and the cost-effectiveness of technology based educational programs are not known at this time.
- **Need Technological Training.** A large and comprehensive staff development program is needed. Sixty-nine percent of instructors responding to a survey rated themselves as unskilled or possessing limited proficiency in computer competency.
- **Technology Linked to Curriculum.** Teacher training in technology should be linked to the curricular context with which it will be used.

Chapter 4

Staff Development

"The typical practicing adult educator is new to the position, has little or no course work in adult education, comes from a field outside of adult education, is likely to leave it in five years, and works very hard."[1]

Staff development, professional growth, inservice. These are different terms that are applied to the ongoing training of instructors after employment. Whatever terminology is used, there is dramatic need for continuous, organized methods of delivering teacher training to California's adult educators.

There is dramatic need for continuous, organized methods of delivering teacher training to California's adult educators. . . to speak of 5,000 to 10,000 adult educators needing basic level inservice is so staggering it is almost ridiculous.

Reference has been made previously to the 69 percent of instructors who need technological training. The Adult Education Unit has for years used the estimate of a one-third annual turnover among the state's adult education instructors.[2] One-third of the part-time staff in public school adult education in 1988–89 was 5,280. Two-thirds (needing technological training) would be 10,560. Those figures would increase approximately 30 percent with the addition of community college noncredit instruction. Is training this many teachers possible? What resources are available?

Even using the lowest set of figures, to speak of 5,000 to 10,000 adult educators needing *basic* level inservice is so staggering it is almost ridiculous. The figures are especially disheartening considering the resources available to the systems. But the problem will not go away by throwing up one's hands in despair.

So what has been or is being done about training the state's adult educators? Are there good models to follow in planning activities? What are the resources? These questions will be addressed through examining:

- Background
- The Federal Projects in California
- Other Considerations

[1] M. Hartman, "Some Surprises Found in National Survey of Adult Educators," ***The Learning Connection***, 1983–84, page 4, as cited by Michael Galbraith and Bonnie Zelenak, "The Education of Adult and Continuing Education Practitioners," ***Handbook of Adult and Continuing Education***, Jossey-Bass, San Francisco, 1989, page 125.

[2] A 1988 California Teachers of English to Speakers of Other Languages (CATESOL) survey of public school adult education instructors confirmed that 66 percent of ESL instructors had been in their jobs less than four years. 37 percent of noncredit ESL instructors were in the same category.

Research findings and a number of both generic and specific models for delivering staff development are reviewed in the background section.

4.1 Background

There are multiple approaches to examining staff development activities. Professional literature is filled with research on the subject. Yet, "*Staff development is far from an exact science, nor can observers, users or researchers come to grips with all the variables in an exact way. Yet we should try to do that.*"[3] Background information will include:

- Components of Effective Staff Development
- Community College Programs
- Public School Initiatives

Models and studies from the colleges and schools covered in this section are, for the most part, generic. Activities targeted specifically for adult education programs are addressed later in this chapter.

COMPONENTS OF EFFECTIVE STAFF DEVELOPMENT

The literature provides many and slightly varying lists of analyses, components, or principles of effective staff development. The ones reported here are derived from *Effective ABE Staff Development.*[4]

- Collaborative planning helps ensure success.
- Institutional policies, including goals and process, impact effective staff development.
- Training conditions, including time, place and incentives, can facilitate successful staff development.
- Sufficient time and opportunity to master and apply content is needed.

[3] Burton W. Kreitlow, "Staff Development: What Works and Why," *Adult Learning*, American Association of Adult and Continuing Education, Washington, D.C., May 1990, page 7.

[4] ABE Staff Development Consortium, *Effective ABE Staff Development*, U.S. Department of Education, Washington, D.C., March 1987.

- Staff development activities should address varied individual needs and styles.
- Evaluation is an integral component to determine effectiveness and future planning.

A self study guide elaborating on these principles is provided in **Appendix H**.

Of these principles, one administrator zeroes in on two. He emphasizes the flexibility needed to meet individual needs and to address agency goals simultaneously.[5]

Developing Trainers

Both command of content and a high level of facilitation skills are needed to be an effective staff developer.

Both command of content and a high level of facilitation skills are needed to be an effective staff developer. These are distinctly different skills and do not always appear lockstep in the same person. Thus "training the trainer" has became a popular concept among adult educators and in the broader training development field.[6] Those who do exhibit both skills become the core or primary trainers.

Workshop presenters must be well grounded in content to have credibility with busy practitioners. Thus, development and knowledge of training content is a first step. Next in building a team of trainers, start with others who have expertise in the targeted field and can master refined content quickly. Good teachers already have some facilitation skills on which to build. The "training of trainers" then can concentrate on developing or refining communication skills and specific presentation techniques.

This process follows the same steps outlined in "Skill Acquisition" below. A skilled trainer always models the content of the training.

Skill Acquisition

The goal of any staff development program for educators is the implementation of new skills in the working environment. There is broad terrain to cross from knowing *about* a skill or technique, knowing *how* to perform it, and then actually *using* that skill or technique in the instructional setting. "*We know better than we do,*" exhorts one staff development authority.

[5] Clifford Tyler, "Components to Consider For Your District's Staff Development Needs," *Thrust*, Association of California School Administrators, Burlingame, California, February/March 1990, page 21.

[6] Mary Potash, "Staff Development as a Four Act Play," unpublished manuscript, Connecticut Adult Education Staff Development Center, West Hartford, October 1989, Page 17.

"It is time to follow the lead of researchers. . . who present firm evidence of the developmental nature of staff development."[7]

The training model appearing most frequently in the literature on staff development delineates a four step process:

- **Awareness.** Presentation of a new theory, concept or skill can be accomplished through lecture, reading, or discussion. Concepts are successfully communicated approximately 85 percent of the time, but few, 15 percent, acquire the targeted skill, and a mere 5–10 percent can apply it.
- **Demonstration or Modeling.** One can observe the skill or technique being used in a simulated environment, on film or videotape, or by actual observation in the work place. Presentation of content and its demonstration can occur simultaneously.[8] With demonstration, the level of understanding remains the same, skill acquisition rises slightly to 18 percent, and application rests at 10 percent.
- **Practice with Feedback.** It is better for practice to occur in "protected settings" such as simulated conditions, with other teachers role playing students, or with small groups of students. If necessary one can practice with a full class, but should be prepared for less than total success for awhile. Trainers or other trainees can provide feedback, or one can critique oneself utilizing audio or video recordings. With practice understanding still remains constant, skill attainment shoots up to 80 percent, but application advances to only 15 percent.
- **Application with Coaching.** This involves transferring the skill to the instructional setting and using it with continued coaching/structured feedback until it becomes a natural part of the instructor's repertoire. It has been found that as many as 15 to 20 demonstrations with a like number of opportunities for practice are needed prior to full application. There is a dramatic jump to an 80 percent success rate when coaching accompanies application.[9]

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[7] John Tibbetts, "Faces of Staff Development," ***Adult Learning***, American Association of Adult and Continuing Education, Washington, D.C., May 1990, page 6.

[8] A presentation on learning styles can incorporate oral/aural (explanation and discussion), visual (reading materials, overheads, or video), and kinesthetic (tasks at different work stations to illustrate the styles) activities.

[9] Bruce Joyce, CBAE Conference, Sacramento, March 1983 and CBAE Staff Development Summer Institute, San Francisco, June 1983. Bruce Joyce and Beverly Showers, *Power in Staff Development Through Research in Training*, Association for Supervision and Curriculum Development, Alexandria, Virginia, 1983, pages 1–32. Joyce and Showers are cited frequently in much of the literature on staff development.

It is clear from the above that to produce noticeable change in skill levels that staff development activities need to take place over time and to include opportunity for participants to practice and receive considerable feedback. These concepts are illustrated in **Exhibit 4.1**.[10]

Exhibit 4.1
ACQUIRING NEW SKILLS/BEHAVIORS

	Levels of Impact (Change)*		
Training Content	Concept Understanding	Skill Attainment	Application (Work Setting)
1) **Awareness:** Presentation of content	85%	15%	10%
2) **Demonstration:** Modeling the concept or technique	85%	18%	10%
3) **Practice and Feedback:** Sheltered practice with structured feedback	85%	80%	15%
4) **Application with Coaching:** Transferring skill to classroom with ongoing feedback	90%	90%	80%

* Percentages are not exact (estimates only).

Note: How to read this chart: If modeling is used as part of the training, 85% of the participants will be able to show concept understanding of the training content; 18% will be able to demonstrate the content; 10% will be able to apply the training to their work situation.

Source: Adapted from CBAE Staff Development Summer Institute, San Francisco, June 1983.

Agency or program evaluation designs are not within the scope of this paper. However, evaluation is the necessary "last" step of any educational initiative. The results of the evaluation, in turn, become part of the needs assessment for the next cycle of planning.[11]

[10] There is not total agreement on this training model. Linda Lambert in "The End of Staff Development," (a draft chapter submitted for the 1989 ASCD Yearbook) sees the standard model of staff development as restrictive and counterproductive to what is known about adult learning. She sees it as "outside-in" (content and methodology being transmitted from one to another) approach rather than inside-out. The latter approach takes what the practitioner brings to the professional growth activity and builds upon those skills, knowledge, and questions, which follow the principles of adult learning. Somehow Lambert sees a conflict in the two approaches. That interpretation would negate the possibility that one can attend professional skill building activities because of a perceived need for skill building on that topic. After building her case, however, she concludes, "*When knowledge is invited in when needed, the cognitive map is user friendly. Learning is more rapid and long lasting. However, the need for continued practice with feedback still exists in order to maintain and refine the new skills*"—the same ending point as the training model she is critiquing.

[11] For a general evaluation model see Richard Seder, et al., (1978). *A Prescription for CBAE Program Evaluation.*

Growth Opportunities and Skill Levels

The benefits of these broad conferences are derived from the contacts developed with other professionals from the field and the opportunities to become aware of their programs and activities.

Professional growth opportunities abound. There are national and state conferences, sponsored for the most part by professional organizations: American Association for Adult and Continuing Education (**AAACE**), Teachers of English to Speakers of Other Languages (**TESOL**) and its state affiliate CATESOL, Adult Literacy and Technology Project,[12] Association of California Community College Administrators (**ACCCA**), Association of California School Administrators (**ACSA**), California Council for Adult Education (**CCAE**), and the Competency Based Education (**CBE**) conference sponsored by the California Department of Education (**CDE**). The benefits of these broad conferences are derived from the contacts developed with other professionals from the field and the opportunities to become aware of their programs and activities.

The flashy workshop, the inspirational speaker and the one shot presentation are much maligned by most staff developers. Not by all. *"Lectures have stood the test of time and no research has ever concluded that the 'lecture' should be eliminated."*[13] These one-time presentations that dominate conferences can be looked upon as menus. They serve the purpose of making participants aware of what is available, what can be done. They're samplers, teasers, previews of coming attractions. If, from attending ten one-hour presentations, a participant comes away with one "match" to be investigated further, perhaps to be brought to the home agency and developed, then the "shopping" time has been well spent.

Large conferences then provide the first step in the training cycle: awareness. The skilled facilitator will cover both awareness and demonstration/modeling of a concept or skill in a short workshop.[14] If time slots are slightly more than an hour, participants may go home with an "action plan", designed to encourage follow through. But, in reality, no one knows how much follow up activity really takes place. Thus, one must look elsewhere for sustained training.

Regional conferences and workshops provide a mix of awareness activities and more targeted training. Both CATESOL and CCAE have regional conferences that are similar in format to the state ones. Of most importance, however, training series are also offered regionally. The CDE sponsored ESL Teacher Institute and the soon-to-be-established ABE Teacher Institute are two examples. A series

[12] This national conference will be held in California in 1991.

[13] Knowles, op. cit., page 7.

[14] Joyce & Showers, op. cit., page 64.

of Teacher Improvement Process (**TIP**) or clinical supervision workshops would be others. In such a series, spaced over time, three full steps of the training cycle are addressed. Presentation of the concept incorporating or followed by demonstration/modeling starts the process. There is time for multiple demonstrations and participant practice with structured feedback. Between sessions participants can practice the skill on the job, report back to the training group and recycle the process. Ideally these training series could facilitate peer coaching between sessions and following the training. In reality, the logistics of that cannot be controlled by most trainers.

OTAN Resource Centers serve as the clearing houses for state-funded regional staff development activities. Determined by regional needs assessments, professional growth activities can run the gamut of single sessions to sustained training. On the surface it appears that most have a mix of those two approaches.

It is at the local level that the sustained follow through and ongoing feedback to teachers practicing new skills must occur.

It is at the local level that the sustained follow through and ongoing feedback to teachers practicing new skills must occur. This can be accomplished by peer observation and coaching or with the assistance of coordinators or resource instructors. It was with this in mind that a coordinator's component was added to the ESL Teacher Institute. Before sending instructors to the Institute, coordinators attend an overview of the training methods and materials. Then each is asked to submit a plan of follow-up activities for the participants each is sending to the Institute. It is also at the local level that evaluation of staff development activities must occur.

The potential levels of impact of staff development opportunities are shown in **Exhibit 4.2**.

Participation

Need for staff development can be self stated, *i.e.* the instructor responding to a needs assessment or seeking out individual activities, or training needs can be observed by others. An elementary school bilingual instructor may not report a need for additional training upon employment for an adult ESL class. The ESL coordinator may have a different point of view. So opportunities for professional growth fall upon a field of varying receptivity. The degree to which employees are open to staff development has been categorized, perhaps somewhat facetiously, as follows:

Exhibit 4.2
POTENTIAL LEVELS OF IMPACT FROM STAFF DEVELOPMENT OPPORTUNITIES

Type of Training:	Location / Type of Activity:				
		Regional		Local[2]	
	State Conference[1]	Conference[1]	Training[2]	Workshops	Training
AWARENESS Presentation of Content	■	■	■	■	■
DEMONSTRATION Modeling the Concept or Technique	▒	▒	■	■	■
PRACTICE AND FEEDBACK Sheltered Practice with Structured Feedback	None	None	▒	▒	■
APPLICATION WITH COACHING Transferring Skill to Classroom with Ongoing Feedback	None	None		None	■

Degree of Impact: ■ High ▒ Medium □ Low

[1] Conference workshop sessions are usually 1 hour in length, sometimes 1.5 hours.

[2] Regional training and local activities normally range from 3 to 4 hours in length.

- **Omnivores.** These professionally energetic employees actively seek out and engage in both formal and informal exchanges with colleagues, workshop attendance, course work, professional reading, active participation in professional organizations, or any other opportunity that may come their way.
- **Active Consumer.** Still openly seeking growth activities, this employee may be a bit more discriminating in selecting which staff development opportunities to attend. This staff member absolutely believes in the value of inservice and thinks that at least some activities should be mandatory in order to reach those who need help but won't attend voluntarily.
- **Passive Consumer.** This category is characterized by those staff members who are willing and cooperative participants at any convenient staff development opportunity that is organized for them. However, these persons will not seek out or initiate activities and probably wouldn't

attend an optional professional conference held only 15 to 20 miles away without external motivation.

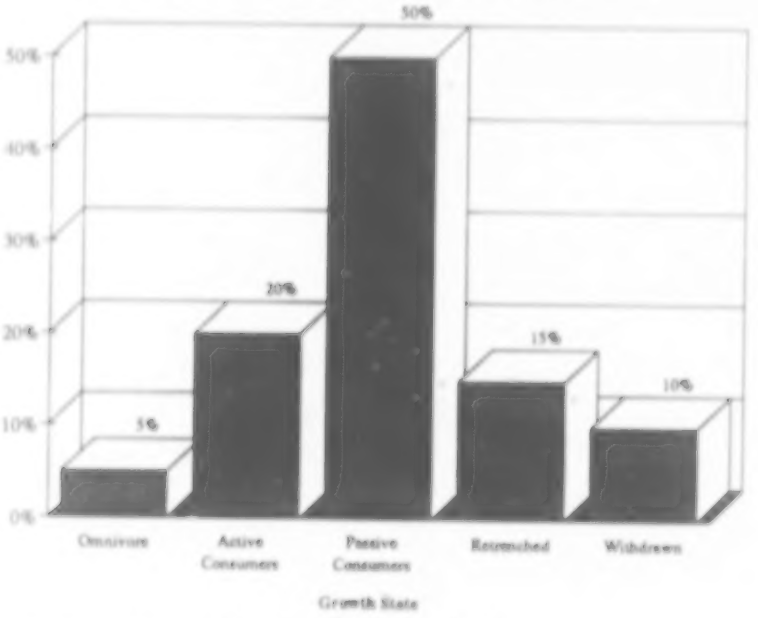
- **Retrenched.** These instructors may see themselves as among the best teachers and therefore inservice is a waste of their time and unnecessary. Any effort to produce change is viewed with suspicion. Any suggestions that current practice could be improved is taken as personal criticism and will be rebuffed by either active or surreptitious opposition or total withdrawal.
- **Withdrawn.** It requires a great deal of outside energy to engage the withdrawn instructor. More passive than the retrenched, this employee may not resist attending required workshops. Once there, however, participation may be nonexistent or only superficial and no value is attached to the ideas or materials being presented.

The distribution of these growth categories among California's K–12 instructors closely follows the normal curve, with the 25 percent of Omnivores and Active Consumers of staff development activities being balanced by a like number of the Retrenched and Withdrawn. **Exhibit 4.3** demonstrates this distribution. That half of the instructional population falls in the Passive Consumer category can only emphasize the importance of strong local and regional staff development programs.[15]

COMMUNITY COLLEGE PROGRAMS

The California Community Colleges were one component of a survey of faculty development activities for higher education in the state in 1987.[16] Part-time faculty teach about one-third of the course load in community colleges, but were not included in the study. Although the survey included only full-time, tenured faculty, selected findings are instructive for adult educators. Findings from the community college component of the study included:

Exhibit 4.3
ESTIMATE OF DISTRIBUTION OF GROWTH STATES (% OF TOTAL) FROM CASE STUDY DATA



Source: The California Staff Development Study, pages 37–46.

- About 90 percent of faculty reported participation in developmental activities. Conference attendance ranked highest, followed by private study, and then on campus workshops.
- Activities emphasized direct presentation of information through workshops and lectures.
- Most programs supported isolated one-time activities that had substantially less cumulative impact on the improvement of instruction and curriculum.
- A minority of colleges took advantage of the flexible calendar (See page 78) that allows up to 15 days for staff development.[17]
- The overall level of resource and organizational support for staff development was low at most colleges.
- Expenditures averaged $1,060 for each full-time faculty member in 1985–86. Had part-time staff

been included in these calculations the figure would have been $725.[18]

- "Part-time faculty . . . were largely excluded from developmental activities. . . While . . . some campuses tried to include part-time faculty . . . participation was quite limited."[19]

Findings from the Berman-Weiler study were submitted to CPEC where the basic question was formulated: *"What faculty development activities should the state support, and how should it allocate this support?"*[20] Within that framework CPEC then developed recommendations to the state legislature. Among those recommendations were:

- Direct faculty development plans toward instructional improvement including but not limited to:
  - improving instruction for students with diverse learning styles
  - improving abilities to use new technologies
- Improve spending levels for faculty development from the current less than 1 percent to 2 percent of each (previous) year's revenues and establish a restricted budget line item for such.
- Establish appropriate planning and evaluation procedures for faculty improvement.[21]

The findings and recommendations from these studies undoubtedly impacted the staff development provisions of *AB 1725*, the community college reform bill passed in 1988.

Assembly Bill 1725

Assembly Bill 1725 is a comprehensive piece of legislation touching every aspect of community college operations, including staff development.

AB 1725 specifies a Faculty and Staff Development Fund for:

- Improvement of teaching.
- Maintenance of current academic and technical knowledge.

[18] At $35/hour, the $725 would pay for 21 hours of instruction time; at $25/hour it would be 29 hours—a range of three to four five days per academic year. Instructor time is not the only cost involved. Staff development facilitators, materials, possible facilities and other costs come out of the same pot of money.

[19] Ibid., pages 3-5, 11-16.

[20] [illegible]

[21] [illegible]

- Inservice training for vocational education and employment preparation programs.
- Retraining to meet changing institutional needs.
- Intersegmental exchange programs.
- Innovations in instructional and administrative techniques and program effectiveness.
- Computer and technological proficiency programs.
- Affirmative action and upward mobility programs.
- Other activities . . . pursuant to criteria established by the Board of Governors.

For 1988–89 $2,588,595 was appropriated under *AB 1725*. This represented 10.75% of total amounts spent on faculty and staff development, with 76.49 percent from district funds and the balance from other sources. This amount was allocated at $7.00 per 1987–88 ADA. If separated out, which it was not, this would have been approximately $500,000 for the noncredit divisions.[22]

The initial results of the Berman-Weiler and CPEC studies and the new allocations showed little change, however. Another study was commissioned to determine the impact of the Faculty and Staff Development Fund and to develop accountability procedures for monitoring the fund.[23] First year findings remained remarkably the same as the Berman-Weiler study. Selected findings include:

- "Special activities occur in some institutions for part-time faculty, but in most cases, the programs are geared toward full-time faculty.
- "Administrators and classified staff members are seldom included.
- "Several colleges were able to expand their staff development activities to include part-time faculty and classified staff where they had previously been excluded.
- "There was no uniformity in conducting (needs) assessments. Many were done unsystematically and when results were in, only in a few cases were they related to the staff development allocation process.[24]

- "There appears to be little realization of the relationship between . . . staff development and flex days."
- The staff development coordinator had no prior staff development experience in 45 percent of the cases. Only 23 percent had more than 3 years involvement in staff development.

Community College Flexible Calendar

Noncredit divisions of the community colleges have one option for staff development activities that is not available to their public school adult education colleagues. The community college minimum work year is statutorily fixed at 175 days. However, upon application to the Chancellor's Office, 8.5 percent of the time (15 days) can be spent in alternative activities that support the instructional program. Districts are encouraged to utilize at least a portion of this time for staff development.[25] Part-time employees can have a prorated amount of their time designated for these "flex" activities. Attendance formulas ensure that there is no loss of ADA.[26] This means it is possible for faculty to receive regular pay while attending staff development. The question of "whose time" and whether or not participants attending staff development activities are paid has been a thorny question through the years for both systems. This is particularly true for part-time employees and is reflected in the level of participation as reported in the previously discussed studies.

Fund For Instructional Improvement

Fund for Instructional Improvement (FII) grants were discussed in **Chapter 2** (see **page 24**) in relation to their impact on curriculum. These funds can also be used for staff development. The same categories of small and large grants which were previously discussed would apply to staff development initiatives as well. Allocations for 1989–90 included fourteen staff development grants totaling $344,286. The grants ranged in size from $6,710 to $50,000 (see **Appendix C**).

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[25] Other approved activities include curriculum work, matriculation, orientation, research, articulation, or specialized instructional activities such as extended field trips.

[26] Rita Cepeda, informational memo to the field, December 1989. An anticipated 87 colleges will apply for the flexible calendar option in 1990–91.

Noncredit Divisions

None of the studies nor initiatives discussed in the previous sections specifically targeted the noncredit divisions, where part-time staff is even more prevalent than in the credit divisions. However, the *AB 1725* funds, the flexible calendar, and the FII grants, all open to the noncredit divisions, offer tremendous potential for staff training.

There may be some reason to believe that staff development for part-time staff in the noncredit divisions may be at a higher level than the reports discussed in the previous sections would indicate. Noncredit divisions which received the federal *Adult Education Act* supplemental grants administered through the California Department of Education have been required to file a staff development plan with the application for those funds. Similarly a staff development report had to be submitted with the year end report and fiscal claim. In addition, the federally funded staff development projects have targeted all agencies receiving federal funds. Indeed, community college noncredit personnel have provided strong leadership in these activities through the years. More will be said about the projects and local programs in the section on **Current Status**.

CDE STAFF DEVELOPMENT INITIATIVES

The California Department of Education sponsors two staff development programs for K–12 instruction. Other departmental programs contain staff development components. Whereas none of these directly apply to adult education, they provide models for consideration.

The California Professional Development Program

The California Professional Development Program, established by *Senate Bill 1882*, provides funds for staff development activities for comprehensive and continuation high schools which do not receive School Improvement Program (SIP) monies. Appropriations for 1989–90 were sufficient to fund 250 schools at $30 per ADA. Applications for the funds called for a School Development Plan, a strategic plan for improvement at that school which was formulated by a representative committee of the school community. Next, a Professional Development Plan is formulated that is directly linked to the school goals. Up to eight days of released time, with no loss of ADA, can be included for professional development activities. School Based Coordinated Programs have similar provisions. Both of these are similar to the

released time available to the community colleges through their flexible calendar.

Other provisions of the California Professional Development Program that adult education secondary level programs might access include:

- Resource Agencies and Consortia, to be established regionally, to provide training in curriculum content, instructional strategies and use of appropriate technologies.

- Subject Matter Projects, modeled after the California Writing Project, to provide both professional development and curriculum improvement support for all subject areas currently required for high school graduation.[27]

Mentor Teachers

The Mentor Teacher Program . . . is designed both to recognize the contribution of outstanding teachers and to utilize their talents in the improvement of curriculum and instruction.

The Mentor Teacher Program has been in effect since the 1983–84 school year. It is designed both to recognize the contribution of outstanding teachers and to utilize their talents in the improvement of curriculum and instruction.

Teachers are nominated for the mentor program by their colleagues with final designation by the board of trustees. The appointment is for a three year period with the specification that successful mentors be given priority for reappointment. They must remain in instructional assignments a minimum of 60 percent of the time. Mentors are paid an annual stipend of $4,000. In addition, there is a $2,000 support cost category to cover released time, training, travel, materials, and administrative expenses. Up to 5 percent of staff can be granted mentor status.[28]

"The primary function of a mentor teacher shall be to provide assistance and guidance to new teachers. A mentor teacher may also provide assistance and guidance to experienced teachers."[29] Mentors are specifically prohibited from participation in the formal evaluation of other teachers.

Here is the time and the expertise to provide nonthreatening, structured feedback to new teachers practicing their skills for the first time or to experienced teachers trying out new techniques. It provides opportunity for that final step, which is so often missing, in the training cycle.

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[27] Program Advisory on California Professional Development Program (*Senate Bill 1882*), California Department of Education, Sacramento, October 27, 1989.

[28] "Program Advisory on Mentor Teacher Program," California Department of Education, Sacramento, August 1987.

[29] *California Education Code*, Article 4, Section 44496.

A few adult schools have established mentor programs patterned after the official state funded program. For example, Salinas Adult School funds a mentor program with the lottery funds that district allocates to the adult program.[30]

4.2 The Federal Projects in California

The Adult Education Unit has always included staff development as a component of the federal *Adult Education Act* programs in California. However, targeted use of federal funds began in curriculum before it did in staff development. The level of sophistication in staff development activities between "then" and "now" is startling. In the late 1970's state sponsored staff development mostly consisted of statewide meetings and providing funds for local use.

There were three meetings a year of the directors of local federal grants. These were large group, "talking heads" convocations with information-giving as the primary activity. There was little attempt at skills training and not much was done to facilitate the sharing of ideas and concerns of the local administrators.

The spring meeting was devoted to a series of awareness workshops by the various special projects funded through the *Adult Education Act*. See **Appendix I** for a listing of special projects since 1975.[31] These projects all had a dissemination component. For the most part, however, that was limited to awareness workshops at state meetings and print material describing the projects. An early exception to that was a dissemination year (1979–80) for the California Competency Based Adult Education Project (**CALCOMP**).[32] During that year two days of initial training, plus materials, were available to districts wishing to convert to a competency based high school diploma program.

During this time funds were available to local agencies for inservice activities. The Adult Education Staff Development Project, 1977–81, administered a mini-grant program for this purpose.[33] Procedures were simple. A request for funds

[30] Not all adult agencies receive the lottery funds those programs generate. Distribution of lottery funds is at the discretion of local boards.

[31] The specific section of the *Adult Education Act* which provides funding for the special projects has changed through the years. Thus, these projects have been known as Section 309, then 310, and now 353 projects. This paper refers to them simply as "special projects."

[32] The CALCOMP committee had been functioning as an ad hoc group since 1977 with support from the funded competency based curriculum and process projects.

[33] The project was under the auspices of the state's professional organizations with California Council for Adult Education serving as lead agency.

contained a statement of purpose and a budget with a breakdown of activities. Most requests were for single workshops.

FORERUNNERS TO CURRENT PROJECTS

The decade of the 1980's brought more cohesive staff development to California's adult educators. Today's professional development efforts were preceded by and evolved from five projects whose contributions warrant attention:

The decade of the 1980's brought more cohesive staff development to California's adult educators.

- ABE-ESL Staff Development
- Cultural Awareness Training Project
- Dissemination Network for Adult Educators
- CBAE Staff Development
- CBAE Regional Demonstration Sites

Each of these projects developed products and procedures which are still being utilized by current staff development projects or local agencies.

ABE-ESL Staff Development

The ESL Staff Development project—broadened in scope to become ABE-ESL Staff Development the following year when administration of the local mini-grants was added—was funded from 1980–82. This project was the precursor to the current ESL Teacher Institute.[34] First in California to institute the "train the trainers" approach, the project trained a group of facilitators. It developed a six hour core workshop for new instructors. Regional special topic workshops were offered in response to needs assessments. A three day intensive summer institute, offering two or three strands, rounded out the project's components.[35]

After the two year contract concluded the project's core workshops were scheduled by other agencies for three years. However, no developmental work was done and the workshop content and maintenance of skilled trainers were difficult to "hold together" in its orphaned state.

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[34] This project and its current successor, the ESL Teacher Institute, were/are sponsored by the Association of California School Administrators, Burlingame. Acknowledgment is equally due, however, to San Francisco Community College Centers for releasing personnel to direct the projects.

[35] In addition to the above, under sponsorship of the Adult Education Field Services Unit, the first California CBAE Conference was coordinated by ABE-ESL Staff Development and the Dissemination Network for Adult Educators in 1982.

Cultural Awareness Training Project

School year 1981–82 added two more training projects. The Cultural Awareness Training Project included the following components:

- Development of cross cultural training materials
- Identification of cross cultural training consultants
- Development of culture specific training materials
- Identification of culture specific consultants
- Production of the ***California Cultural Awareness Resource Guide***
- A series of cross cultural training workshops for adult educators and employers

Once again the need for cross cultural training is being identified as a high priority as California becomes a "no majority" state.

The **Guide** contains the written materials that were developed and a list of the consultants. Much of the material in the **Guide** is generic and is still pertinent. Note is made of it now as once again the need for cross cultural training is being identified as a high priority as California becomes a "no majority" state.

Although this was only a one year project, it had considerable impact for the following two or three years as its materials and consultants continued to be used at conferences and in local agency training. Moreover, cultural diversity was a specified strand in the first CBAE Staff Development contract.[36]

Dissemination Network for Adult Educators

The Dissemination Network for Adult Educators (**DNAE**) was funded from 1981–88.[37] DNAE's general purposes were described in **Chapter 2** (see **page 23**). Its staff development responsibilities were three fold. First, DNAE gave facilitator training to those who would be delivering the workshops to local agencies. Second, DNAE provided the training necessary to adopt one of its exemplary programs. The initial training could be from three hours to three days. Follow-up technical assistance was also provided, yielding a limited amount of structured feedback. This staff training was free of charge to

[36] The Cultural Awareness project was sponsored by Chinatown Resources Development Center, San Francisco.

[37] DNAE operated under contract with the Association of California School Administrators, Burlingame.

any agency that had a local grant under the *Adult Education Act*. Other agencies could contract for the services. And last, an exemplary program could be a staff development project itself, such as a volunteer training program.

A selected list of programs for which DNAE provided staff training is found in **Appendix A**. DNAE had other information-giving, product production, and brokering responsibilities which were outside this discussion of staff development.

CBAE Staff Development

In 1982 California's *State Plan* for use of federal funds from the *Adult Education Act* mandated the implementation of competency based adult education (**CBAE**) for all local agencies receiving federal grants. The mandate emphasized the life skills needed for functional literacy.[38] The California Competency Based Adult Education Staff Development Project was funded from 1982–88 with the charge to provide local agencies the training and technical assistance necessary to ensure that implementation. The comprehensive project was to address the roles of administration, guidance, instruction, assessment, and cultural diversity.[39]

To ensure an integrated approach to CBAE implementation the project was guided by a consortium of practitioners. Members represented the disciplines listed above, the other special projects (CASAS, DNAE, and ESL Teacher Institute), and professional organizations. A number of processes and products resulted.

- **Agency Teams.** Each agency was to designate a staff development team with representatives from administration, guidance and instruction (both ABE and ESL/VESL if possible). These teams had some specific responsibilities relating to the CBAE project, but the emphasis was on team work at the local level.
- **Long Range Planning.** At regional meetings the agency teams were assisted in developing a preliminary three year plan for CBAE implementation. One of the three years was designated as the primary year for major implementation efforts. These plans were then updated annually in the application for the local federal grants.
- **Implementation Grants.** Local agencies were allocated extra staff development funding in their primary CBAE

[38] The mandate was based on the deficiencies identified by the Adult Performance Level study out of the University of Texas and reported in 1975. The study was replicated and the results confirmed by the 1978 "Needs Assessment of Adult Basic Competencies in California" by the NOMOS Institute in Berkeley.

[39] The CBAE Staff Development Project was conducted through the Adult Education Center of San Francisco State University.

implementation year. Grants were awarded upon submission of the staff development plan.

- **Advanced Staff Developers.** Practitioners were identified for their expertise in specific areas: management, guidance, instruction, assessment, evaluation or cultural diversity. Two to four days of CBAE process and facilitator training were given to this group. This cadre of trainers was then publicized as a resource for local agency staff development. One of these trainers had to be utilized if federal funds were used. Succeeding years and training enlarged this initial group of consortium members and the 30 Advanced Staff Developers who could be used for local training.

- **Regional Workshops.** The project's first year utilized regional workshops to disseminate information about the CBAE mandate and the project, to facilitate the drafting of agencies' preliminary three year plans, and to assist in beginning implementation strategies. Later the state was divided into seven regions for refined delivery of CBAE training. A consortium member assumed coordination responsibilities for each area. Training was delivered based on regional needs assessments. Training formats varied from three hour workshops to intensive (6 to 9 hours over two days) to a series delivered over a couple of months.

- ***Institutional Self Assessment Measure.*** The ISAM, developed during the first year and later revised, is a self evaluation instrument. Containing strands for management, guidance, instruction and assessment, it yields a profile of the level of CBAE implementation. By identifying weak areas it is a good needs assessment for local staff development. Originally administered by a facilitator (a consortium member or an advanced staff developer with special training) with an agency's team in the major CBAE implementing year, it has since become a frequent tool of local staff development teams.

- ***Handbook on CBAE Staff Development.*** By the conclusion of the project's first year consortium members had produced a ***Handbook*** for distribution to local agencies to guide them in CBAE implementation. Following an overview of CBAE a chapter is devoted to each of the strands of management, assessment, guidance and instruction. Each chapter contains a section on cultural considerations. The 42 appendices contain a plethora of specific examples of various CBAE materials and back up information.

- **State Conference.** The first year of the CBAE mandate the Staff Development Project sponsored the state CBAE Conference. These conferences were always co-sponsored by Adult Education Field Services/Adult Education Unit.

Beginning in 1982 active coordination of the conferences rotated among the state's special projects.

- **CBAE Training Packets.** A number of detailed workshop packets were developed and made available to local agencies. Included were detailed facilitator outlines, overhead masters, and handouts. A script and other exercises were included for independent study. All but one of the packets included videotapes to demonstrate the concepts of the workshop. Three packets targeted varying levels of ESL, four covered the different approaches to VESL, one each were developed for ABE Math and ABE Reading, and the one without a videotape was on program evaluation.[40]

- **Leadership and ABE Institutes.** These two day training sessions were devoted to skill building for small targeted audiences. The Leadership Institute concentrated on the role of the coordinator/resource instructor/department chair as a partner to an administrator. Team attendance was a prerequisite for the limited number of spaces. One goal of the ABE Institute was to initiate a support system and opportunity for networking among these perhaps-most-isolated adult instructors. In addition to responding to prior needs assessments both Institutes concentrated on the use of case studies in bringing reality to the training setting. Each of these Institutes were conducted for two years toward the end of the contract.

- **CBAE Evaluation Study.** ***CBAE: Investing in Change*** is the report of an evaluation of the CBAE mandate in California (covering 1982–85). Findings were many, both subtle and complex. Overall "high implementing districts" showed greater student goal attainment or retention and higher mean gain scores on pre/post testing than "low implementing districts."

- **Teaching Improvement Process.** The TIP is an instrument for structured classroom observation that emerged from the CBAE evaluation study. The TIP identifies six categories for observation, each with discrete subpoints. Training in use of the instrument has become highly sophisticated. Using videotaped classroom activities for demonstrating the concepts, different types of training are given for different purposes: Certified Observer Training, Teacher Awareness Training and Skill Building Training (one session for each of the six categories).[41]

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[40] These training packages are now being distributed by the Outreach and Technical Assistance Network, Hacienda La Puente Adult Education.

[41] The TIP instrument was developed by the field researchers of the evaluation study with input from CBAE Staff Development consortium members. It was refined based on pilot implementation by agencies participating in two ABE/ESL Coordinator Networks. The Certified Observer Training, Teacher Awareness Training and some of the Skill Building Training were completed as a part of the contract. The balance of the Skill Building Training sessions and other refinements have been completed after the conclusion of the staff development contract. For a comprehensive description of TIP and its different uses see David Hemphill, "Making Sense to Teachers About Teaching," ***Adult Learning***, May 1990, pages 15–18.

A two year coaching initiative was cut short when all projects were redirected into identifying and providing targeted training for potential CBAE demonstration sites.

CBAE Staff Development, working in cooperation with the other projects, left its mark on California adult education. Certainly, competency based education is not fully implemented in all agencies. But two points are readily apparent. One is the dramatically increased involvement of instructional staff in program improvement activities (*i.e.* work on curriculum, assessment, and staff development). The second is the significant shift from traditional basic skills instruction to a more open, student-centered, practical integration of basic and life skills. Much of the credit for that goes to this project.[42]

CBAE Regional Demonstration Sites

During 1987–88 applications were accepted by the Adult Education Unit for CBAE Pilot Sites. These were to identify exemplary local programs with high levels of CBAE implementation. All projects (CBAE Staff Development, CASAS, ESL Teacher Institute and DNAE) were involved in the selection and evaluation of these programs. Sixteen pilot sites were selected. ISAM's were administered. Site visits were made by four person teams of project and state department personnel to verify program quality. Classes were visited and structured interviews were conducted with instructors, guidance and administrative personnel as well as students. Targeted training was delivered to these agencies to address areas of identified needs. After follow-up visits by the evaluation teams five sites were selected. Staff development was then reorganized to make these demonstration sites the key organizations in setting goals for and delivering regionalized staff development.[43] After a transition year, these sites are now a part of the Outreach and Technical Assistance Network.

GED Academy

A teacher training program for GED instructors was provided limited funding for two years prior to the time the GED service was transferred out of the Adult Education Unit. The funding was restricted to initial materials development and training of trainers. Just as the GED is a self-supporting operation within the California Department of Education, so were these training sessions. Tuition supported, there was high

[42] The *CBAE Staff Development Annual Reports* filed with the Adult Education Unit are one source for the information in this section.

[43] The demonstration sites were coordinated by Hacienda La Puente Adult Education.

demand for the four part training series that was delivered statewide for two years. The full Academy succumbed to the lack of a financial base. Due only to the dedication of three or four of its trainers, a cut down version of the Academy containing two sessions continues to draw full houses and high evaluations. These are offered under the auspices of California Council for Adult Education in Sacramento and one San Francisco Bay Area location.

CURRENT PROJECTS

There are currently six projects that deliver staff development to California's adult educators. Each statewide project has its own primary purpose so that there is a minimum of duplication of effort. CASAS gives training in use of the assessment system. Leadership Training and the Executive Development Program address the needs of administrators. The ESL and ABE Teacher Institutes and the Outreach and Technical Assistance Network target instruction. In addition, in the past each local agency receiving a federal grant has had a staff development plan.

Comprehensive Adult Student Assessment System

Staff training delivered by CASAS is dedicated to use of its assessment instruments and procedures. That is a considerable amount. Because of the high turnover of adult education staff there is annual need for the "New to CBE/New to CASAS" and the "From Assessment to Instruction" workshops. There is ongoing demand for item writing workshops as instructors became more attuned to improving assessment within their own classrooms. Training in use of the writing and applied performance assessment manuals ranks high. And if an agency adopts a new component, for example the Employability Competency System, training would be required. Social initiatives such as GAIN and IRCA have also increased need for local training to work with the assessment instruments CASAS developed for those programs. There are certified trainers for each workshop that CASAS delivers. Certification comes from an initial training session, co-presenting with an experienced facilitator, and then being observed and coached on initial solo outings.

CASAS has an annual Summer Institute that is a combination of working sessions for its committees and training opportunities for the member of its consortium.[44]

[44] The San Diego Community College Foundation is the sponsoring organization for CASAS.

Administrator Programs

In operation since 1985, the Adult Education Leadership Training Program is designed for new administrators or those with supervisory responsibilities who are emerging leaders. The overall goal is to develop a new generation of leaders fully cognizant of adult education history, role and needs. Specific administrative skills in such fields as programming, budgeting and personnel, are honed as well as developing awareness and expertise in legislation and advocacy for the adult student population. The program is a three year commitment. During the first two summers there are intensive three day training sessions. Throughout the three years there are one day sessions prior to each of the major adult education conferences. During the final year each participant completes an individual project which will be of benefit to the local agency.

Spurred by the success of the new administrator training the Executive Development Program was introduced for experienced administrators. Emphasizing long range planning, problem solving and refinement of administrative skills, this promising new endeavor completed its first cycle in the summer of 1990.

Both of those programs stress the importance of developing support systems. It should be noted that in a majority of adult education programs there are no administrative "job alikes" within the agencies. Adult education directors, principals, deans or provosts must look to other neighboring agencies for someone with comparable working conditions and responsibilities.

Outreach and Technical Assistance Network

New in 1989–90, the OTAN has some, but not all, of the responsibilities formerly allocated to both DNAE and CBAE Staff Development. In addition, there are major new tasks relating to outreach to unfunded counties and technological training.

> The overall purpose of the OTAN staff development component is to facilitate the implementation of competency-based processes into adult education at the local sites and classrooms through staff development activities and technical assistance. Emphasis will be placed on the planning and delivery of regional and sub-regional staff development activities based on local input and planning. This 'grass roots' approach will provide staff development activities at a truly local level to teachers, aides, guidance personnel, and administrators.[45]

[45] Hacienda La Puente Unified School District, *Proposal for Adult Education Outreach and Technical Assistance Network*. September 1989, page 59.

The former demonstration sites are now referred to as OTAN Resource Centers. Six other sites were added to meet specific needs such as technological expertise or geographical access. Current sites are listed on **page 27**.

These Centers coordinate the scheduling of all regional activities, including the regional delivery of training from the other projects. In addition, the Centers:

- Organize workshops based on identified needs.
- Provide activities emphasizing a variety of alternative instructional approaches to reach diverse populations.
- Disseminate training modules, video programs and print materials for professional growth.
- Schedule regional information and planning meetings.
- Provide opportunities for classroom observations.
- Assist with self evaluation studies.
- Coordinate training in the use of educational technology.

Not all activities are scheduled at the Centers. Rather, they serve as regional brokers to coordinate all activities open to more than one agency.

Finite management of the activities remain with the OTAN project staff, leaving Centers staff to concentrate on program content. Management activities include coordination of the various Centers, conducting needs assessments, all fiscal arrangements including payment of workshop facilitators and other expenses, evaluation, providing materials for resource libraries, maintenance of master calendar of state and regional professional growth opportunities, provision of technical assistance to both the Centers and local agencies, the establishment of new sites, and coordination with both the Adult Education Unit and the other projects.

The major new staff development initiative of the OTAN lies in the area of technology. This was discussed in **Chapter 3** in " Role of OTAN" on **page 57** and the section on "Training" on **page 62**.

The Teacher Training Institutes

Both the ABE and ESL Teacher Institutes are subject specific. The Institutes are designed to help alleviate the problems created by high staff turnover in adult education programs.[46] As the lead-in to this chapter indicates, the typical new adult education instructor comes from outside the field. Even those with training in basic reading or second language acquisition probably have not worked with adults. The Institutes address both course content and techniques appropriate for adults. Indeed, the brochures for the ESL Teacher Institute state that the training is designed for those "*. . . new to CBE, . . . new to ESL, . . . new to adult education.*"

The ABE Teacher Institute in its projected form is new.[47] Patterned in format after the ESL Teacher Institute, the ABE Teacher Institute will begin its developmental work in 1990–91. Just as its targeted instructors and the students they teach are different from those working with a second language, so will this project need to have the latitude to develop its own identity.

Building on the former ABE-ESL Staff Development Project, the ESL Teacher Institute was funded beginning in 1985–86. Narrower in scope than the other active projects, and with the objective of concentrating on one instructional area, it has become a finely tuned model for staff development.

Project components include teacher training, skill reinforcement, trainer certification and developmental work.

Teacher Training

The basic series for new instructors includes four sessions spaced three to six weeks apart. Each workshop follows the model of presentation, demonstration, practice, and application. Each series presents the components of CBE/ESL and lesson planning. Other modules are offered based on a needs assessment of the participants' agencies. There are eleven technique modules from which to choose: one lesson planning, two listening, five speaking and four reading. This means that, given the opportunity, an individual could repeat Institutes to be trained in additional techniques.

Training for experienced instructors was introduced in 1989–90. Two sessions, covering two modules each for either

[46] The fiscal inability to offer full-time positions with benefits is the generally accepted reason for high attrition among the predominantly part-time staffs found in the state's adult education agencies. There has never been a follow-up study of former staff members to document this.

[47] The Adult and Occupational Education Division of Los Angeles Unified School District is the successful bidder for this contract.

beginning or intermediate/advanced levels, were offered. Training procedures followed those described for beginning teachers.

Also piloted in 1989–90 was a series of four sessions on cooperative learning. Although cooperative learning techniques are utilized in some of the other modules, this series will give participants a firm foundation in the nuances of this approach to instruction.

Skill Reinforcement

An integral part of the series training, skill reinforcement can be acquired via a number of methods. Those employed by the Institute need elaboration.

"Homework" assignments are given to practice the new skill between sessions and to report back at the next meeting. A structured feedback form, introduced in the training, is provided to guide the trainees in developing and analyzing their own lessons between sessions. Use of the form in observation of colleagues is encouraged.

Coordinator training is a part of the skill reinforcement infrastructure. As a prerequisite to enrollment in the Institute, a participant's coordinator attends a half day training session. After receiving an overview of the specific modules the trainee will have, the coordinator is assisted in developing a plan for ongoing skill reinforcement at the local agency. This plan takes the form of identifying support materials needed by faculty to implement the new skills and selecting specific feedback activities that are viable. Examples of such activities include peer or coordinator observations/coaching with the feedback form or videotaping trainees for self analyses.

Trainer Certification

Potential trainers participate in a complete Institute and demonstrate mastery of content by either being observed or submitting videos of their classroom work. They then receive training in facilitation and delivery of specific modules. They are certified after initial workshops, which are observed by project staff or highly experienced trainers, are delivered satisfactorily. Training is an ongoing process as new modules are added to one's repertoire. Each summer there is an intensive two day colloquium that focuses on improvement of skills and the training process.

Local agencies have been encouraged to nominate trainers so they will have skilled facilitators to deliver in-house Institute training.

Developmental Work

For training to be consistent in outcome, the product and its delivery need to be consistent. This consistency, at least in the demonstration of concepts and techniques, is possible through technology. CASAS, the former CBAE Staff Development project and the ESL Teacher Institute have all utilized videotapes for this purpose.[48]

In addition to the print materials for each module, the Institute has developed approximately three videotapes a year to support its training activities. There are tapes for all eleven technique modules. Each consists of demonstration of the technique in a classroom setting. The classroom demonstration itself models the four steps of presentation, demonstration, practice and application. The "live action" is complemented with voice overs and interspersed interviews with the instructor to clarify the concepts addressed in the demonstration.

The project has also developed a videotape on lesson planning and an overview video of the various techniques. The latter, along with supporting materials, can be used by local agencies for a refined needs assessment. Videotapes to support the four cooperative learning modules are on the agenda for the future.

The training modules, including the videotapes and supporting materials, are being commercially licensed for national distribution. California agencies will be able to purchase the package at reduced cost.[49]

Local Staff Development

With the emphasis on "local," there is little that can be generalized to all agencies. It is to be expected that some have much stronger local staff development programs than others. Generally speaking, local programs have complemented regional offerings. They have zeroed in on specific agency needs that are not addressed by the state projects. And they have made professional growth activities readily available to those "passive consumers" who are not inclined to seek out training that is not at their fingertips.

The local federal grants have a $3,500 base that is designated for "*. . . staff development, program assessment, and networking*." Pre-post testing for the state is required. Other than that, use of the grant is at local discretion. It is common

[48] Videotape production was by the Media Services Department, Correctional Education Division, Hacienda La Puente Unified School District.

[49] K. Lynn Savage, unpublished manuscript, internal documents and brochures, ESL Teacher Institute, Burlingame, CA.

for these designated federal funds to be used for out of district travel and conference attendance, which might not be approved otherwise.

Formerly an annual staff development plan had to be submitted with the application for federal funds. A year end report on those activities was filed with the final fiscal claim.

A 1989–90 example of an annual plan from Salinas Adult School contains a statement of staff development philosophy, goals and strategies for a five year period, a schedule of meetings of the staff development committee, and a calendar of activities for the year. The calendar lists both locally sponsored training and offerings from the County office of Education that may be of interest to adult instructors.

Through the careful targeting of its federal funds, the 1980's witnessed the building of strong staff development programs for California's adult educators. . . Caution not to rest on past laurels is warranted. . . Programs wither if not nourished.

A 1988–89 year end report for ABE/ESL staff development from San Diego Community College Continuing Education Centers lists 67 workshops with 1409 total attendance. This large agency conscientiously schedules the same training at alternate time slots (mornings and afternoons) and days to accommodate the different schedules of its instructors.

Annual plans and year end reports are no longer required. In the current *State Plan* staff development falls under the broad goal of **Improving Program Quality and Responsiveness**. It is to be hoped that agencies will continue to offer vital staff development activities as the two in the examples given above have done.

The sustained follow-up and feedback needed to move the rate of new skill application to the 80 percent range is only possible at the local level. Therefore, local agencies' professional growth opportunities are vital to program improvement.

Reflections on the Federal Program

Under the guidance of the Adult Education Unit and through the careful targeting of its federal funds, the 1980's witnessed the building of strong staff development programs for California's adult educators. This was accomplished through utilizing the expertise of local practitioners responding to local needs. Demonstrating the principles of good staff development, field based projects have developed highly sophisticated processes and products that have earned national recognition.

Staff development in the 1990's can build on this record. However, caution not to rest on past laurels is warranted. Staff development, with its goal of ensuring quality programs, is

never "done." Programs wither if not nourished. There is always a need for "more." There are always new needs. And there are always new teachers to be trained. The challenge is great, and as always, resources are limited.

Continuing projects address ongoing needs. New directions have been identified. The ABE Teacher Institute turns attention to improved literacy instruction for the native English speaker. The new focus of OTAN is on the crying need for technological training. Field based needs assessments may reveal other areas needing attention. Indeed, the federal program agenda is full.

4.3 Other Considerations

This chapter has addressed staff development needs for those subjects that are within the purview of the federal program. This is not to negate the needs of the other state funded areas of adult education. However, any inservice programs for these fields must come from within the local budget or through professional organizations. Since there is no state framework for these activities there is no collected body of material addressing them.

Vocational and parent education instructors have professional organizations. California Council for Adult Education, within its regional and state conferences, offers opportunities for showcasing all subject areas. For example, for several years the Bay Section spotlighted the needs of older adults in its annual spring conference. But for the most part, staff development opportunities are rare for these state areas not eligible for the federal supplementary funds.

There are other factors to consider also. Not all topics pertinent to staff development fit neatly into background materials or components of the federal program.

This section will address the potential of technology for improving and expanding staff development opportunities. Next, the training needs of aides and volunteers, who are playing a more visible role in the delivery of literacy instruction, will be recognized. Following that, the provision of a core of full-time instructional staff as an approach to providing stronger in-house staff development will be suggested. To conclude, the inservice needs of counseling and guidance personnel are highlighted.

TECHNOLOGY AND STAFF DEVELOPMENT

Use of videotapes by CBAE Staff Development and the ESL Teacher Institute for modeling concepts and techniques has been discussed previously. The value of using this media, in addition to the previously mentioned product consistency, lies in capturing authentic instructional activities for demonstration and analysis. CASAS has also used videotaped segments in awareness workshops and for training in placement testing.

Samples of use of video technology for staff development in local programs and for teleconferencing illustrate the potential for expanded use of this medium.

Local Programs

Other uses of video include the previously mentioned analysis of one's own instruction as a form of structured feedback. Sequoia Adult School has started building its own staff development video library. Local workshops are taped so they can be viewed by absentees or new employees on an interest or as needed basis. The resource instructor has taped demonstration lessons from the core textbooks that are used in the ESL program. These are frequently viewed by new employees or job applicants prior to their own classroom demonstration which is a part of employment screening. As mentioned in **Chapter 3**, a tape has been made for training instructors in applied performance assessment. In addition to "directions", the tape includes demonstrations of this assessment from four levels of instruction. Also mentioned earlier is Los Angeles' orientation for new employees.

Teleconferencing

Two staff development projects in teleconferencing merits attention. Educational Telecommunications Network (ETN) is operated by Los Angeles County Office of Education and targets the K–12 level. Adult level training specifically designed for the amnesty program was the object of the IRCA/SLIAG[50] Teacher Training Teleconference Series.

Educational Telecommunications Network

ETN broadcasts via satellite by subscription to local districts, coordinated through county offices of education.

[50] *Immigration Reform and Control Act*/State Legalization Impact Assistance Grants.

ETN has only staff development, not instructional, broadcasts. The programs for instructors are scheduled from 3:15 to 4:30 on Tuesday, Wednesday and Thursday afternoons. Subscribing districts can obtain licenses for duplication. Thus far, the broadcasts have targeted the implementation of the state's curriculum frameworks. For example, there may be a Tuesday afternoon series on language arts in the primary grades. At its conclusion, the next Tuesday series may concentrate on the middle grades or cover writing assessment across the curriculum in grades 3, 6, 8, and 12.

The live, interactive telecasts are facilitated at the local receiving site. The process is described in one of their informational brochures:

> ETN satellite facilitators from local districts are trained by consultants from the Los Angeles County Office of Education. They are trained in group process-discussion skills and in the technological 'know-how' necessary to receive ETN transmissions. They manage the pre-viewing, while-viewing, and post-viewing activities as well as the optional and follow-up activities. Content specialists partner with ETN satellite facilitators to guide discussion and answer questions specific to the content being presented.
>
> Both the content specialist and the ETN satellite facilitator are supported by an ETN leader's guide which contains:
>
> - A summary of the video conference plus key concepts.
> - A minute-by-minute guide to the video conference with detailed descriptions for conducting pre-viewing, while-viewing, and post-viewing activities.
> - Appropriate facilitator remarks.
> - Optional activities.
> - Detailed suggestions the follow-up activities.

Programming for nonclassroom personnel is scheduled during the morning hours.[51]

IRCA/SLIAG
Teacher Training Teleconference

Many ESL/Civics programs more than doubled in size in 1988–89 as the full impact of amnesty legislation hit the adult education system.[52] The same strain for classes was placed on community based organizations which had traditionally

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[51] "Distance Learning Isn't So Distant: It's Here and Now," Los Angeles County Office of Education Workshop, Association of California School Administrators Conference, Santa Clara, April 5, 1990.

[52] The *Immigration Reform and Control Act* of 1986 granted amnesty to undocumented individuals who had been living in the country prior to January 1, 1982. Legalization was also extended to those who worked in agricultural jobs at least 90 days between May 1985 and May 1986. Upon verification of this status a temporary residence card, good for 30 months, was issued. In order to transition to permanent residency the pre-'82's had to demonstrate simple knowledge of English and basic understanding of United States History and Government. This could be done by passing a test or attending an appropriate class for a minimum of 40 hours (of a 100-hour course) and receiving a Certificate of Satisfactory Pursuit.

conducted educational programs. Moreover, many community based organizations began offering instruction for the first time to meet the demand for classes.

The series broke new ground in delivery of staff development to adult education by demonstrating the potential for reaching large numbers of trainees within a short period of time.

California budget control language required that instructors of amnesty classes be credentialed or attain specified amounts of inservice training. Large numbers of people were being pressed into instructional service, most without adult experience and many with no teaching background.

The demand for inservice was at an all time high. Local agencies struggled to recruit, orient, supervise and assist new hires. Extra sessions of the ESL Teacher Institute were offered. And the IRCA Unit of the California Department of Education delivered training by teleconference.

The IRCA/SLIAG Teacher Training Teleconference Series was delivered on seven Saturdays over a four month period. Each of the satellite broadcasts was live and interactive with a conference coordinator responding to questions by telephone at specified intervals during the three hour sessions. Each of the 17 downlink sites had a facilitator who was provided detailed outlines and directions for each section. Content covered legal requirements of the amnesty program, curriculum, the CBAE approach to instruction, lesson planning, and methods/ materials for three levels of instruction. Practice activities were assigned between sessions and discussed at the following meeting.

Evaluations were uniformly high with 80–94 percent of the responses being in the good/excellent range in all categories but one. The exception was the interactive phone period. The participants wanted more! This may have been predicted based on what is known about the importance of feedback in staff development.

Close to 1,000 new instructors participated in the teleconference series in 1988–89. A similar series was offered in 1989–90. Certainly the series broke new ground in delivery of staff development to adult education by demonstrating the potential for reaching large numbers of trainees within a short period of time.[53]

STAFF DEVELOPMENT IS FOR EVERYONE

There is a tendency to think of staff development as targeting professional staff. Support staff and volunteers are critical components of the adult education delivery system.

[53] Autumn Keltner, internal documents and brochures, Amnesty Education Office (formerly the IRCA Unit), California Department of Education, Sacramento.

Their training and inservice activities can make the difference between the run of the mill program and the highly successful one.

Support Staff

Who is the first person with whom an adult learner comes into contact? It's usually a telephone operator, a receptionist, a secretary, or an aide. The importance of their contribution is recognized in the introduction to a sample outline for training:

> First impressions are crucial in adult education. Whoever answers the phone or first speaks to the walk-in student may determine the success of the program. Encourage a receptive environment for all adult students and develop a staff with sufficient general knowledge...to respond successfully to inquiries. Staff training should include, at a minimum, the following four areas: program knowledge, knowledge of student population, knowledge of tasks to be performed, and communication skills.[54]

First impressions are crucial in adult education. Whoever answers the phone or first speaks to the walk-in student may determine the success of the program.

A good example of such commitment to professional development comes from the Illinois Adult and Continuing Educators Association support staff interest section. They requested state conference workshops on understanding the adult learner and counseling and advising adults. The section chair was explicit about the reasons for those requests: *"We are often the first people the students, or potential students, encounter in our institutions, and we really want to know more about who those students are and how we can help them."*[55]

Program assistants are both paid staff and volunteers. Well trained aides are used for intake and placement. Many can handle informal student services such as giving information about community services. Certainly bilingual aides representing a community's major language groups are a primary asset to any ESL program. Some aides become highly skilled at assisting with small group instruction. They are valuable, indeed, in a multi-level or preliterate ESL class. Individualized learning labs serving ABE or high school level students need the assistance of an aide. Low level readers need small group or one-on-one attention. Aides are particularly helpful in those settings where computer assisted instruction is employed.

Instructional assistants are used in highly individualized ways so that training may need to be equally individualized. When appropriate, however, they should be included in staff development activities scheduled for faculty.

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[54] Pat Johns and Cuba Miller, "Guidance," ***Handbook for CBAE Staff Development***, CBAE Staff Development Project, San Francisco State University, October 1983, Appendix I.

[55] Doe Hentchel, "Staff Development for the Continuing Education Staff," ***Adult Learning***, American Association of Adult and Continuing Education, Washington, D.C., May 1990, page 13.

Volunteer Programs

"Each one teach one" has become a familiar expression since Barbara Bush started a national promotion for volunteerism in the early 1980's. The challenge originated with Dr. Frank Laubach in the 1930's.[56]

Volunteer efforts in California have been sponsored by three major literacy programs: California Literacy Campaign; California Literacy, Inc.; and Literacy Volunteers of America–California (LVA).

California Literacy, Inc. (subsidiary of Laubach Literacy International) is the senior partner, having provided services in the state since 1956. California Literacy Campaign is centered around the public libraries. Its infrastructure has received public funding since 1985. LVA joined the ranks in 1986. Both the Laubach program and LVA are dependent on grants and donations for their organizations' expenses.[57]

The programs have similar goals and approaches to their tasks. Each recruits tutors, provides them with training, and matches them with individuals seeking one-on-one instruction.

Training Methods

It is staff training that is of concern here. Historically, training methods have differed between Laubach and LVA. In overly simplified terms, Laubach is based on phonetics and builds from the sounds of letters and combinations of letters into words and phrases, a structured approach. There is an emphasis on sound-symbol relationships and learning by association. LVA is whole language, sight based, starting with whole words, phrases and sentences. Language experience stories come from this school of thought. Component parts of reading come much later in the instruction.

The Laubach method and the materials they use are highly structured. Volunteers with no background in reading instruction may be more comfortable with that structure. Again generalizing, the whole language approach is more unstructured and eclectic. It requires more on-the-spot diagnostic and prescriptive capabilities on the part of the tutor. Those skills require more initial training.

The above are basic approaches. In reality Laubach introduces sight words and language experience stories early on and LVA tutors will help their students in "sounding out"

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[56] Mary Anne Nelson, *et. al.*, ***Literacy Tutor Packet***, California Literacy, Inc.; San Gabriel, 1989, inside cover.

[57] For an overview of these programs the reader is referred to Barry Stern, ***The California Adult Education System***, Pacific Management and Research Associates, Sacramento, February 1989, pages 50–57.

words. Learning styles are recognized. Materials distributed by California Literacy, Inc. point out "*...that an effective teacher or tutor needs to be able to draw from a variety of strategies to help an adult learn to read.*"[58]

The library programs have used training materials from both of the systems described above. All of the programs provide a training series of from four to six initial sessions which are a prerequisite for becoming a tutor. All maintain schedules of ongoing training activities in which tutors are encouraged, but not required, to participate.

The library programs tend to have paid trainers. California Literacy, Inc. has won national awards for its training certification program which utilizes all volunteers. Its program for tutor trainers employs similar steps to those outlined for training ESL Teacher Institute Trainers.

Collaborations

By the end of 1990, California Literacy, Inc. and the state's branch of Literacy Volunteers of America will have completed a merger. A name for the new organization has not been selected. Training methods and materials will be merged and the new entity will remain affiliated with both national organizations.

The same skills that make good instructors make good tutors. Whether professional or volunteer, there are common training needs.

Other collaborations occur between the volunteer organizations and public adult education agencies. It is common for staff to serve on each other's advisory boards. Although there is no documentation of exact numbers, many adult schools and community colleges provide tutor training. This is an authorized course offering under vocational training. Exemplary examples of this kind of cooperation can be found in San Diego, Culver City and Sacramento. Other cooperative ventures include local literacy councils. For example, Contra Costa Literacy Alliance recruits tutors and students and makes referrals to the individualized tutoring programs provided by a variety of organizations throughout the county or to the local community colleges or adult schools, as appropriate.

The volunteer agencies, in turn, frequently provide tutors to the schools to work with students who need extra help.[59]

The same skills that make good instructors make good tutors. Whether professional or volunteer, there are common training needs. Surely funded staff development activities in the public agencies can be made available to cooperating

[58] Phyllis Barry and Terry Bullock, "Approaches for Teaching Adults to Read," University of Cincinnati, April 1989, a manuscript distributed by California Literacy, Inc.

[59] Volunteerism can also lead to career changes. Three of the core staff of ESL instructors from Sequoia Adult School originally worked for several years as volunteers prior to obtaining teaching credentials. Surely, this is not unique.

volunteer organizations which may need the support. There is strength in collaboration.

FULL-TIME INSTRUCTIONAL STAFF

Lifelong professional growth is the hallmark of any professional. Currently much of the need for staff development activities in adult education is due to high staff turnover. The initial training required by new hires dominates statewide staff development efforts and saps resources.

By increasing the number of full-time staff within an agency, the turnover rate could be alleviated and most staff development activities could be institutionalized.

By increasing the number of full-time staff within an agency, the turnover rate could be alleviated and most staff development activities could be institutionalized.

A 1988 CATESOL survey revealed a rate of six percent full-time ESL instructors from the 96 adult schools responding. The figure for 9 noncredit divisions was three percent.[60] For public school agencies the survey reported that 66 percent of part-time ESL staff had been in their position less than four years. That statistic was better, 37 percent, for noncredit divisions, perhaps because of higher pay scales.[61]

The problems created by part-time staff were recognized by *AB 1725*, which calls for 75 percent of full-time staff in community college credit programs. The noncredit divisions are negotiating a ratio with the Board of Governors, but one can be confident that reasonable ratios will be established.

Barriers to full-time staff in adult education are both the previously referenced level of funding and the need to maintain flexibility. The funding problem is real, but somehow San Francisco and Los Angeles manage to have substantial percentages of full-time staff at the current levels. The need for flexibility to meet student shifts in demand can be met adequately with a smaller proportion of part-timers.

There are many advantages to increasing full-time staff. Staff attrition would drop.[62] With more full-time staff, there would be fewer part-time staff to train each year. Job descriptions for full-time staff can include mentoring new teachers, assisting in curriculum development, and becoming in-house staff developers.[63] The research on staff training drives home the necessity of that final step of prolonged

60 The sampling was not scientific, but the response rate was high. There were 120 public agencies in the federal program at the time of the survey. Neither Los Angeles with 32 percent contract teachers nor San Francisco with 52 percent are included. Both their large overall size and their uncharacteristically large number of contract teachers would skew the profile for the state as a whole.

61 These figures are not at wide variance with the California Department of Education estimate of one third annual turnover.

62 For example, it would not be necessary to leave adult education to take a contract at the elementary or secondary level in order to earn a living wage.

63 These adjunct duties are comparable in time to the nonclassroom assignments of public school instructors: grading papers for 150 students, supervision of facilities or student activities, open houses, parent conferences, etc.

structured feedback or coaching in order to fully implement a new skill or teaching technique. This proposal is an ideal way of providing it.

In summary, the benefits to adult education agencies of having a core of full-time professional staff include:

- Reducing staff attrition.
- Reducing the number of annual new employees who need basic training in adult methods and materials.
- Developing a core of in-house, highly skilled curriculum and staff developers.

Having the capability to meet local needs locally, state resources could turn to professional growth activities for all rather than being drained on the basic training needs of newcomers.

Having the capability to meet local needs locally, state resources could turn to professional *growth* activities for all rather than being drained on the *basic training* needs of newcomers.

COUNSELING AND GUIDANCE

Little is known about the level of guidance services available to adult education students in California.[64] It is safe to say that it is far too low. No data is reported to the state about numbers of counselors or student access to guidance services.

Counselors tend to be assigned to the high school diploma program and its feeder courses in basic skills. It is also common for counselors to be used as quasi-administrators. Special funding may provide vocational counselors for those students in GAIN or JTPA programs. Students in the largest adult program, English as a Second Language, receive little direct counseling services.

Due to these circumstances previous staff and resource development in this area has taken the approach of identifying guidance functions, *e.g.* placement, vocational guidance, student services. Where there is a shortage of certified counselors different approaches to meeting those needs have been suggested. Existing counselors can serve as resources to the instructional staff. They can develop and train teachers to use group guidance activities in the classroom. They can help identify instructional materials which also address guidance

[64] The Federal *Adult Education Act* calls for student counseling services. Section 10560c of the California Administrative Code provides a ratio "of properly credentialed personnel exclusively for administration, supervision, and guidance services." There is no specific breakout for each of those categories. The provision has had no active enforcement since the passage of Proposition 13 in 1978.

concerns. They can provide referrals to other community resources.[65]

It has been a number of years since these "teacher as counselor" activities have been offered. They undoubtedly need to be revived.

The proposed Community Adult Education Information Services will require highly skilled professional and paraprofessional staff.[66] Current and new guidance personnel will need training in the new system and the software which will guide it.

A comprehensive inservice program for counselors and paraprofessionals addressing personal, social, educational and career guidance functions is needed to round out professional growth opportunities for those working in adult education.

4.4 Key Findings on Staff Development

There is a recognized body of professional literature on effective staff development. California adult education projects used those principles over the past decade to produce highly effective systems for staff training. Findings on professional development for California adult education include:

- **Key Principles.** Effective staff development programs include collaborative planning, agency policies that motivate participation, training over time, a variety of delivery styles and options, and evaluation components.
- **Train the Trainer.** Staff development programs can be leveraged by training a core of field based trainers.
- **Training Components.** Awareness/presentation, demonstration, practice with feedback and application with coaching are the basic steps involved in acquiring new techniques.
- **Coaching.** It is the last step, application with coaching, that moves staff development effectiveness from the 20 to the 80 percent range. This can only be achieved with strong local programs that provide ongoing support.

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65 Pat Johns and Cuba Miller, *op. cit.*, and CASAS Career Guidance Module, San Diego Community College District Foundation, Inc. Strategic Recommendation 5, "Linkage of Support Services to Increase Access," will also address need of and provision for student services.

66 Dennis Porter, ***Community Adult Education Information Services: Policy Option Paper on Strategic Recommendation 3***, Adult Education Institute for Research and Planning, Sacramento, June 1990.

- **Participant Receptivity.** Varying levels of participant receptivity effect impact of training.
- **Uneven Application of Principles.** Evaluation studies of K–12 and community college credit staff development programs show that the principles of effective staff development are not uniformly employed.
- **Released Time.** Both K–12 and community college systems provide means for released time for staff development. Public school adult education has no similar provision.
- **Training for CBAE.** The state's special projects in staff development for adult education, applying the principles of effective staff development, worked cooperatively during the 1980's for the implementation of CBAE.
- **Exemplary Staff Development.** Exemplary processes and products, which have received national dissemination, emerged from the adult education staff development projects of the 1980's.
- **Attrition Creates Need.** High attrition and the need for training new staff require disproportionate share of staff development resources.
- **Training for Literacy and Technology.** Challenges for the 1990's include increased attention to literacy instruction and the need to bring adult educators into the realm of technological expertise.
- **Impact of Technology.** Technology offers potential for increasing quality and quantity of staff development opportunities.
- **Training for Everyone.** Staff development is for everyone. Volunteers, support personnel and administrators need professional growth programs along with instructional staff.
- **Need for Full-time Staff.** A core of full-time professional staff in adult education agencies could reduce attrition, improve curriculum and staff development at the local level, and free state professional growth resources to address a broader range of goals.
- **Counseling and Guidance.** An inservice program for professional and paraprofessional guidance personnel is needed.

The most dramatic need in staff training for the coming decade is undoubtedly in the area of technology. Basic training must be given to thousands. A technological comfort level must be achieved by adult educators before this medium's potential for improving and expanding services can be achieved.

Chapter 5

Proposals for Action

A combination of maintaining the best of current practice and implementing proposed initiatives can ensure the quality programs needed to prepare adult education students for the 21st century.

Technology is [not] the magic answer to all deficiencies . . . The reason for the inclusion of technology in so many of these proposals is that no statewide resources have been allocated to it in the past.

The preceding chapters have reviewed the developmental work and current endeavors that directly impact program quality. Curriculum and staff development are the obvious areas for such an examination. The role of technology was considered separately. Technology cuts across the two other components with its powerful potential for altering both course content and modes of delivery. Adult education as a field is in its infancy in use of technology. Much work in both staff training and curriculum is needed to integrate technology into the adult delivery system.

Seventeen proposals to enhance support for the instructional program are put forth for consideration (see **Exhibit 5.1**). They are presented within the major topics of this paper. There is an eighteenth proposal suggesting priorities.

- Staff Development
- Curriculum
- Educational Technology
- Priorities for Feasibility Study

Grouped by primary topic, they are overlapping in nature. For example, local technology plans address both curriculum and staff training; software development is also a curriculum issue.

The proposals were developed from the preceding discussions. They are designed to validate current practice or strengthen areas of perceived weaknesses. Within that framework many of the proposals involve technology. Not because technology is the magic answer to all deficiencies. It is not. It is important not to expect technology to solve all of the system's problems. Rather, the reason for the inclusion of technology in so many of these proposals is that no statewide resources have been allocated to it in the past. In contrast, both curriculum and staff development have been the attention of previous state-sponsored initiatives.

Exhibit 5.1
OUTLINE OF PROPOSALS

STAFF DEVELOPMENT

(1) **Staff Development Projects**
(2) **Full-time Staff**
(3) **Professional Development Days**
(4) **Advanced Staff Developers**
(5) **Staff Development Fund**
(6) **Public-Private Collaboration to Enhance Staff Development**

CURRICULUM

(7) **Adult Education Survey**
(8) **Curriculum Frameworks**
(9) **Teacher/Counselor Grants for Innovation**

EDUCATIONAL TECHNOLOGY

(10) **Local Technology Plans**
(11) **Technology Teacher Training Academy**
(12) **Software Development**
(13) **Educational Technology Act**
(14) **Evaluation of Educational Technology**
(15) **Model Adult School for the 21st Century**
(16) **Technical Support System**
(17) **Television Broadcast Capabilities**

PRIORITIES FOR FEASIBILITY STUDY

(18) **Priorities for Feasibility Study**

5.1 Proposals on Staff Development

Instructional and support personnel remain the primary resource in the delivery of educational services. The attention given to their training and sustained professional growth opportunities directly impacts the quality of instruction that students receive.

Six proposals are presented that are designed to ensure sustained, high quality staff training:

- Staff Development Projects
- Full-time Staff
- Professional Development Days
- Advanced Staff Developers
- Staff Development Fund
- Public-Private Collaboration to Enhance Staff Development

The first of these validates and recommends expansion of current practices. The balance of the proposals will add new dimensions and opportunities.

STAFF DEVELOPMENT PROJECTS

The ABE Teacher Institute developmental work begins in 1990–1991. The OTAN Resource Centers now bear primary responsibility for ongoing training in CBAE process, methods, and materials. Whereas there is a limited technological training component now, it needs to be expanded, as suggested in Proposal 11 (**Technology Teacher Training Academy**). The ESL Institute has training materials utilizing more advanced technology on its agenda. Changes in the field and staff turnover ensure a need for continuing training in instruction and assessment. Both separate training and inclusion in activities for instructors can enhance the contributions made by volunteers and support personnel.

Proposal 1
STAFF DEVELOPMENT PROJECTS

Continue and expand the staff development opportunities provided through current and new projects:

- **Teacher training projects concentrating on specific instructional techniques and skills for ABE, ESL and use of educational technology to enrich curriculum and instruction.**
- **Regional centers for ongoing training in competency based education, to address more localized needs and to coordinate the delivery of workshops from the teacher training projects.**
- **Training for new and experienced administrators to target concerns unique to adult education and to enhance leadership skills.**
- **Training for proper assessment for placement, monitoring of student progress and certification of competency.**
- **Training for volunteers and support staff to match the varied roles they serve.**
- **Training for counselors, teachers and support staff in the skills needed for the delivery of guidance services.**
- **Cross cultural training.**

The continuation of current and initiation of new staff development projects cannot be looked upon as a maintenance operation. Just as adult education is always shifting and changing to meet current trends, so must the projects that train its practitioners remain vital, active, and alert to emerging needs.

FULL-TIME STAFF

The predominance of part-time staff creates major problems for community college noncredit and public school adult education. The resulting high attrition rate and the resource-sapping need to continually recruit, orient and train new instructors are obstacles to systematic program improvement. California Community College reform legislation recognized this problem at the credit level by establishing a ratio of full-time to part-time staff. Although it is anticipated that such a ratio for noncredit staff will be set by that system's Board of Governors, this has not yet occurred.

Provision should be made for a core of full-time staff for both public school and community college noncredit adult education.

Proposal 2
FULL-TIME STAFF

Establish a core of full-time professional staff within adult schools and community college noncredit divisions to:

- **Provide professional opportunities with attractive working conditions and sufficient income for a career in adult education. This will reduce attrition by promoting a stable facility.**
- **Reduce attrition by reducing the number of part-time positions to be filled annually.**
- **Minimize the need for annual recruitment and training of new staff, thus releasing administrative time and resources for broader program improvement activities.**
- **Include adjunct duties for full-time instructional staff to:**
  - **develop curriculum.**
  - **serve as inhouse staff developers.**
  - **mentor new teachers.**
- **Establish a ratio of full-time to part-time staff based on a combination of factors, including average daily attendance, number of sites, and times of instruction within a department.**
- **Give priority to establishing a core of full-time staff in elementary and secondary basic skills, including ESL. These are the departments with the highest attrition rates, the greatest curriculum needs, that largest numbers of students, and the greatest need for state-funded training.**

There are quite practical reasons for advocating more full-time staff. Far too many resources are repeatedly drained in keeping adult education classrooms staffed. This revolving door is due in large part to the fact that 12 to 15 hours of work a week is not a living wage. It is not uncommon for an instructor to work for two or even three agencies in order to earn a living. One grows weary and eventually many of these individuals leave adult education to work in elementary or secondary schools. With them goes the training that the adult system has provided and the cycle begins again. Resources that should be going into equipment, instructional materials, professional growth activities for experienced staff, and other aspects of program improvement are lost to the annual staffing problem.

Adequate funding levels and needs for variable times and amounts of instruction remain barriers to maintaining a large majority of full-time staff. However, the system can and must do better to sustain systematic program improvement.

PROFESSIONAL DEVELOPMENT DAYS

Time must be provided to allow all staff members to attend staff development activities. That is difficult now because adult education classes are scheduled mornings, afternoons, evenings and frequently on weekends. There is the further question of optional or required attendance. If attendance is required, hourly employees need to be paid. This becomes a budget item. There is a need for time and financing to be made available for all staff to attend inservice activities.

Proposal 3
PROFESSIONAL DEVELOPMENT DAYS

Seek legislative authority to provide released time to public school adult education staff for professional development activities. The time should be made available without loss of ADA to the local agency.

ADA calculations can be formulated to provide for comparable attendance figures to be used on days that class time is used for professional development activities.

The community college system has its flexible calendar that allows up to 15 days annually, without loss of ADA, for approved activities in support of the instructional program. These are accessible to the noncredit divisions. The California Department of Education has provisions whereby the schools serving the youth population can apply for up to 8 days for staff development without loss of ADA. Public school adult educators need this same capability.

ADVANCED STAFF DEVELOPERS

Existing teacher institutes have certified trainers to conduct their workshops. Formerly, a list of advanced staff developers from different areas of expertise had been identified and trained for regional and local inservice activities. However, there is attrition in staff developers just as there is in faculty. New trainers need to be selected as former ones are no longer available and as new areas of need are identified.

Proposal 4
ADVANCED STAFF DEVELOPERS

Reinstate advanced staff development training through the OTAN sites:

- **Establish criteria and procedures for identifying a core of advanced staff developers for regional and local inservice.**
- **Teacher institute trainers would automatically be included in this cadre of facilitators.**
- **Advanced staff developers should represent a wide range of expertise and content areas including, but not limited to instruction, guidance, assessment, administration, workforce literacy, and cross-cultural training.**
- **Provide facilitator training for those who are not teacher institute trainers.**
- **Publicize list of certified advanced staff developers with respective content areas via OTAN's electronic communication system.**

Practitioners need training in workshop facilitation. The training sessions provide a time to clarify policy on reimbursement rates and other procedures. The training also provides an opportunity to bring trainers up to date on current policies or other matters which may be of general interest to the field.

STAFF DEVELOPMENT FUND

A fund should be established to ensure continuity of staff development projects. These projects have historically been funded by Section 353 (formerly 309 and 310) of the federal *Adult Education Act*, P.L. 100–297, as amended. This is a proper use of the funds for new staff development initiatives and developmental work. There is a problem in using these funds, however, for sustaining the delivery of repetitive services over an extended period of time. Yet there are needs for this type of ongoing staff development. The establishment of a special fund to meet those needs is proposed.

Proposal 5
STAFF DEVELOPMENT FUND

Seek legislative authorization for the establishment of a Staff Development Fund within adult education appropriations.

- **Include provision for community college noncredit contribution and participation.**
- **Finance the Staff Development Fund through an assessment on local agencies of up to one quarter of one percent (.25%) of revenue generated per unit of ADA.**
- **Use a major portion of the fund to continue delivery of proven staff development activities, products, and procedures which have been developed and successfully demonstrated under the special projects funded through the federal *Adult Education Act*.**
- **Designate a portion of the fund to be used to meet unique regional needs which may fall outside of the activities developed by the special projects. This can include professional growth activities for the entire range of authorized areas of instruction.**
- **Restrict use of the fund to direct delivery of services (*i.e.* training materials, compensation and expenses of workshop facilitators). Developmental and administrative costs would not be authorized expenditures from this fund.**
- **Administer the fund through the Adult Education Unit.**

This Staff Development Fund will provide the mechanism and funding to institutionalize the delivery of proven staff development practices and products.

The suggested amount of up to .25 percent of apportionment funds is a modest contribution. Based on approximate figures for 1990–1991, using a revenue limit of $1,480, the assessment could be up to $3.70 per unit of ADA. That amount is a small fraction of what a local staff development budget should provide. The pooling of a portion of the local staff development allocation can help ensure that quality staff training services are available on a sustained basis.

PUBLIC-PRIVATE COLLABORATION TO ENHANCE STAFF DEVELOPMENT

Adult educators and members of the private sector have much to learn from each other. Business involvement with public education can help ensure that curricula are more responsive to their needs. Educators could gain better understanding of industry's training models and needs. At the same time, business could become more aware of the composition of the adult education population and the obstacles basic skill students face in attaining an education.

Mutual support should produce a better educated workforce and citizenry.

Proposal 6
PUBLIC-PRIVATE COLLABORATION TO ENHANCE STAFF DEVELOPMENT

Encourage public-private sector temporary assignments and exchanges to provide technical support for adult education projects or local agencies.

- **Develop programs to allow and encourage short-term placement of adult educators in company training divisions and private sector trainers in public educational agencies.**
- **Involve the private sector in development of prevocational and vocational curriculum.**
- **Schedule workshops and conferences to facilitate dialog and collaborative endeavors between the private sector and public educators.**
- **Encourage school partnerships and other institutional arrangements to collaborate in the use of resources and expertise between the public and private sectors (*e.g.* work sites, technology, personnel).**

There is a shortage of technical expertise within the education community. Although teachers need to be trained in the selection and use of instructional software by those who are familiar with the curriculum, there remain broad areas where both public educators and industry would gain by the sharing of expertise and resources. These include administrative applications, development of management information systems, training local technicians, or working with a curriculum specialist for the development of software.

Adult level instructors placed in the training division of industry could work with supervisors in analyzing the basic, functional and language skills needed for specific jobs. Instructors would become familiar with industry standards. Targeted curricula could be built around such analyses that could be used in both industrial and educational settings.

Trainers from education can share skills in working with speakers of second languages with supervisory personnel from industry. Trainers from both industry and education can share presentation techniques with one another.

5.2 Proposals on Curriculum

Three of the proposals directly address curriculum. They are offered with the intent of providing means to keep instructional content current and relevant to rapidly changing social conditions. Thus, the proposal on **Adult Education Surveys**, although covering a broad range of topics, first seeks field input on need for work on curriculum. The proposals are:

- Adult Education Survey
- Curriculum Frameworks
- Teacher/Counselor Grants for Innovation

Other proposals with major impact on curriculum include **Local Technology Plans**, **Software Development** and **Evaluation of Educational Technology**. These are described in a later section on technology.

ADULT EDUCATION SURVEY

Annual and special surveys should be conducted to provide better data about local instructional programs and the learners they serve. Broad educational and social needs can be assessed through statistical analysis of available data. This was completed as a first step of the development of the 1988–1989 strategic plan, ***Adult Education for the 21st Century***, a process that will be repeated periodically by the newly established Adult Education Institute (**AEI**). However, there are also needs for data and analysis about special issues (*e.g.* ratio of full and part-time faculty, use of instructional technologies) to guide both state and local planning and program development. Data to support such efforts must come primarily from special surveys of local agencies. With both strategic recommendations and more specific proposals competing for limited resources, a refined needs assessment and other data from the field will help establish priorities and assist in statewide planning.

Proposal 7
ADULT EDUCATION SURVEY

The Adult Education Institute for Research and Planning (AEI) should conduct surveys of local agencies to ensure a current appraisal of specific needs and accurate data in a number of areas:

- *Curriculum*: Data should be collected on local curriculum practices and the need for software development or curriculum writing beyond the completion of the curriculum frameworks. This information should be specific to subject area and include specializations within areas (*e.g.* workforce literacy).

- *Staff Development*: Discrete information should be collected about the numbers and kinds of assignments of nonclassroom personnel in order to plan appropriate staff training. Information also should be collected on administrative ratios, counselor student ratios by subject area, ratio of resource instructors/department chairs by subject area, ratio of noncertificated instructional support staff by subject area and other staffing issues. Additionally, data should be collected on staff development needs in instructional areas not covered by existing teacher training projects. Finally, data should be collected concerning staff turnover, types of teacher certification, and level of multiple job holding.

- *Technology*: Data collection should include information about the existence of local agency technology plans, numbers and types of equipment in place, types of software utilized, curriculum areas to be addressed along with priorities for additional areas, level of staff expertise in technology, and prioritization of training needs including initial training, ongoing inservice, and technical assistance.

- *Priorities and Viewpoints*: Instructors, counselors and administrators should be surveyed on priority resource needs, job satisfaction, staff demographics and other topics of concern. Students also should be surveyed periodically concerning a variety of topics (*e.g.* satisfaction with programs, reasons for satisfaction or dissatisfaction, views on proposed program innovations, etc.).

Surveys to collect the above data should be conducted in ways that ensure that information is representative of field conditions, current and comparable from year to year where that is applicable. When necessary, special surveys should be conducted to address non-routine issues. The content of these surveys should be developed under the guidance of advisory groups.

This information is needed for planning by the Adult Education Unit for the development of adult education curriculum frameworks and allocations of state and federal resources. It should be used by AEI to prepare implementation plans for the strategic recommendations. Identified needs should guide the design of related staff development programs. Additionally, the documentation of adult education needs in technology should be provided to the California Planning Commission for Educational Technology for their use in preparation of the state master plan for educational technology.

Currently, required data collection is minimal—so much so that it is difficult to obtain accurate profiles of the state's adult education programs. A portion of the information proposed to be collected is akin to traditional needs assessments used to plan staff development activities, document need for technical assistance or serve as requests for specific curriculum work. Other data is broader and would be most useful in documenting program needs to the State Legislature, the Planning Commission for Educational Technology or other governmental agencies. Such basic information is essential for accurate long-range planning by the Adult Education Unit and the Adult Education Institute.

CURRICULUM FRAMEWORKS

Current efforts to develop curriculum frameworks for authorized areas of adult instruction should be accelerated. The ultimate goal of this effort is to establish common standards across the state for each of the ten authorized areas of instruction offered by adult schools and community college noncredit divisions.

Proposal 8
CURRICULUM FRAMEWORKS

Accelerate the completion of the curriculum frameworks for each of the state-funded areas of instruction. Give priority to the completion of frameworks for Adult Basic Education (ABE) and English as a Second Language (ESL).

The frameworks are to include quality standards that can define minimum requirements, normal expectations and conditions of excellence.

In addition to subject matter content and quality standards, the frameworks should address:

- **Higher order thinking skills.**
- **Appropriate assessment.**
- **Self esteem.**
- **Multi-cultural approaches.**

Caution is needed in providing both content and adult appropriate quality standards. A variety of both qualitative and quantitative assessment procedures can be identified. Care is to be taken in the selection of methods and materials which enhance the self esteem of adult education's multi-cultural student population.

This proposal is being carried out through the Adult Education Unit. Committees for each subject area include both public adult school and community college noncredit

representatives. The work on the adult high school model curriculum standards is complete. Field tests are being conducted on multiple test forms to assess the life-role applications of the course objectives of the classes required for a diploma. The ESL frameworks are ready for field review. With priority on literacy level instruction in ABE and ESL, immediate attention needs to be directed to work on a curriculum framework for ABE.

TEACHER/COUNSELOR GRANTS FOR PROGRAM INNOVATION

Teacher and counselor involvement should be increased for field-based research and development projects.

Strategic Recommendation 12 calls for " . . . a grants program to test promising new and untested ideas. The grant program should be used only for trial applications and should not be used to continue programs or test ideas that have already been tried and evaluated."

The initial option paper for **Strategic Recommendation 12** has not been completed. Criteria for awarding those grants will need to be developed for the next submission of the *State Plan* for use of research and demonstration funds provided by *Section 353* of the *Adult Education Act, P.L. 100–297*, as amended. Part of the grants program developed in response to **Strategic Recommendation 12** should provide research and development grants to teachers and counselors.

Proposal 9
TEACHER/COUNSELOR GRANTS FOR PROGRAM INNOVATION

Twenty percent of any allocation for Strategic Recommendation 12, Grants to Test Program Innovation of the 1988–1989 strategic plan, *Adult Education for the 21st Century*, should be set aside for grants to individual teachers and counselors. These grants should be directed to:

- **Providing observation and data collection assistance for major research projects.**
- **Piloting and evaluation of programs developed through major grants.**
- **Implementation of programs developed through major grants.**
- **Priority topics selected by the Adult Education Unit.**

These grants should be targeted and monitored to ensure quality research, evaluation and reporting.

Individual teacher grants are excellent vehicles for involving classroom instructors in a broader initiative. Involvement in evaluation efforts sharpens the individual's awareness of data collection and analysis, which can then be applied to local programs. These small components of larger research projects can showcase what individual efforts contribute to the realization of state goals.

5.3 Proposals on Education Technology

The eight proposals developed for educational technology are evidence of the major role technology will play in adult education in the 21st century. They include:

- Local Technology Plans
- Technology Teacher Training Academy
- Software Development
- Educational Technology Act
- Evaluation of Educational Technology
- Model Adult Schools for the 21st Century
- Technical Support System
- Television Broadcast Capabilities

Educational technology is a tool and not an end to itself. Thus, each of these proposals impacts curriculum or staff development. The proposals on planning, model schools and the *Educational Technology Act* pertain to both.

LOCAL TECHNOLOGY PLANS

There is a need to more effectively plan the application of instructional technology at the local level. The California Technology Project's *Survey of Educational Technology* for K–12 showed that school plans guided only 14 percent of hardware purchases. Committees or individuals, possibly working with an informal plan, influenced most purchases. Still, a minimum of a third of technological purchases are made without the guidelines of any kind of plan. Such lack of coordination can become expensive. Adult educators must do better.

Proposal 10
LOCAL TECHNOLOGY PLANS

The Outreach and Technical Assistance Network (OTAN) should assist local agencies in the development of educational technology plans for coordinating the acquisition and implementation of educational technology. Local plans can be developed based on the information collected for the AEI comprehensive survey (Proposal 7) and supplemented as needed for local planning. The local plan should include, but not be limited to, evaluation of the following factors:

- ❑ **Specification of instructional areas and learning environments targeted for application of instructional technologies.**
- ❑ **Specification of options for applying instructional technologies to adult education.**
- ❑ **Criteria for selection of instructional technology.**
- ❑ **Capacity to integrate new purchases of instructional technology with existing and prospective technology.**
- ❑ **Prioritization of training needs for:**
  - **Initial training**
  - **Ongoing inservice**
  - **Periodic technical assistance**
- ❑ **Funding and procurement:**
  - **Net cost**
  - **Cost of financing**
  - **Cost of installation and maintenance**
  - **Sources of funds and resources**
- ❑ **Cost effectiveness of existing and prospective instructional technology:**
  - **Relative costs and benefits of options for application of instructional technology**
  - **Multiple uses and impacts**
  - **Integration and efficiency of operation**

This planning should include participation by resource and instructional personnel, as well as administrators and staff or consultants knowledgeable about educational technology.

Attention needs to be directed to ensuring sufficient hardware in local agencies for each teacher to have ready access now. Benefits of this initial step are twofold. It will facilitate the sharing of curriculum materials via the electronic communication system and it will raise the comfort level of instructors prior to introducing hardware for instructional purposes.

Care needs to be taken that scarce resources are not diluted by expedient purchases of hardware. Acquisitions should be made with an eye to the future so that each component contributes to a flexible, yet coordinated system.

TECHNOLOGY TEACHER TRAINING ACADEMY

There is a need to train a corps of teachers to assist other instructors in learning how to use educational technology.

The training needs for productive use of technology within the adult education system are far beyond the scope of what can be delivered through the current Outreach and Technical Assistance Network (OTAN). Large numbers of trainers need to be identified who are familiar with the curriculum and who have enough experience with computers and other technologies that they can be trained to teach their peers.

Proposal 11
TECHNOLOGY TEACHER TRAINING ACADEMY

Broaden the scope of the Outreach and Technical Assistance Network (OTAN) to include the establishment of a Technology Teacher Training Academy with multiple configurations for delivery of training:

- **One week intensive sessions**
- **Weekend series**
- **On-site training**
- **Technical assistance accessible via an 800 telephone number**

The training should be long enough to allow teachers to have hands on daily experience with technological applications. The program should be flexible enough to directly address their individual skill needs. This training should:

- **Focus on integration of technology into curriculum and the use of technology to facilitate delivery of course content.**
- **Clarify instructors' roles in the use of technology, including roles as facilitator of individualized work, cooperative learning activities, manager of distance learning, coordinator of small groups, and supervisor of aides or volunteer tutors.**
- **Utilize experienced school staff and other practitioners as trainers. These individuals should have previously worked with educational technology in an adult education setting and be familiar with the curricular context with which it will be used.**

Technology training efforts should reach and involve a critical mass of teachers so that they are comfortable using computers and other technology to extend their own productivity. After training, these teachers should be prepared and committed to become trainers of other teachers in their home districts, agencies or programs.

Three to five day intensive sessions could be developed to target each level of expertise from novice to experienced. For the novice, these sessions should give basic training in use of the computer within the context of the curriculum in which it will be used. The more experienced might receive training in use of authoring software or multi-media in the classroom. Extended sessions would also be useful for local technicians who may know equipment but lack experience in working in an educational setting. Weekend series could be delivered over time similar to the delivery system for the ESL Teacher Institute. On site training would be appropriate for the staff of a facility just acquiring new equipment or software. Technical assistance services should provide ongoing backup for teachers as they deal with instructional technology on a day to day basis.

SOFTWARE DEVELOPMENT

Actions must be taken to encourage development of educational software that galvanizes increased application of instructional technology within adult education. If there were a sufficient amount of good software available for adult students, instructors would be more willing to introduce machine based learning materials into the instructional environment. If there were a stronger market, commercial developers would produce more adult appropriate software. This proposal is designed to break that negative cycle.

Proposal 12
SOFTWARE DEVELOPMENT

Coordinated efforts should be made to establish working relationships with software developers to ensure products appropriate for adults. Software should be developed for computer based or assisted instruction with content relevant to adult needs and capable of motivating and maintaining adult interest. The California Department of Education (CDE) should contract with software developers to create appropriate software for adult learners. Based upon guidelines in the *Educational Technology Act* (1989), the following should be implemented for adult education:

- **Software programs for adults should be developed for elementary and secondary basic skills, including English as a Second Language, to meet instructional needs of California's adults. The state should share developmental costs of technology-based programs so that programs are brought to the marketplace that might not otherwise be developed.**
- **The California Department of Education (CDE) should fund and distribute requests for proposals to establish partnerships between software developers and the CDE. California schools would receive discounts on products developed under the contracts, and the state would receive royalties on out-of-state sales of the resulting products.**
- Curriculum specialists should be selected and sponsored by the Adult Education Unit to facilitate the development of software for adults. These specialists could be assigned to the contracted software developers.

The California Department of Education (CDE) has successfully licensed for software development for the youth program. This approach can work for adult education as well. The other alternative is to continue the current, not too successful, strategy of sensitizing commercial developers to the needs of adult learners.

EDUCATIONAL TECHNOLOGY ACT

A master plan for educational technology in the state is being developed without representation from the adult education sector. Meetings should be monitored and those with official representation should be sensitized to the needs of the adult system. Strong efforts should be undertaken to ensure that adult education is included in both the planning and financial aspects of the *Act*.

The *Educational Technology Act* of 1989 establishes the California Planning Commission for Educational Technology with a charge to develop a state master plan for educational technology by January 1992. The *Act* further establishes an Educational Technology Committee to advise the State Superintendent of Public Instruction and the State Board of Education on the implementation and evaluation of technology in the schools. All levels through the University of California are represented, with the exception of adult and noncredit education, for which there is no discrete representation.

Proposal 13
EDUCATIONAL TECHNOLOGY ACT

Seek inclusion of adult education in the provisions of the *Educational Technology Act*.

- **Draft and seek sponsorship of legislation to specifically include adult education in the provisions of the *Educational Technology Act*. This should be done by the Adult Education Institute for Research and Planning (AEI) and the Outreach and Technical Assistance Network (OTAN), working in cooperation with the private sector and the adult and noncredit educational professional organizations.**
- **As an interim measure, AEI and OTAN should jointly select and sponsor official observers to attend the meetings of the Commission and the Committee. These observers should prepare reports and presentations to:**
  - **Keep adult educators informed about the deliberations of these groups.**
  - **Educate the current members about the needs of the adult education systems and their students.**

The *Educational Technology Act* provides planning and implementation grants to local agencies. Adult education should be able to access these funds.

In coming years adult education must undertake the massive task of upgrading the skills of an increasingly diverse population. Every effort must be taken to ensure that the infusion of instructional technology occurring at the K-12 and higher educational levels also occurs within adult education.

EVALUATION OF EDUCATIONAL TECHNOLOGY

Which learners, under what conditions, using which technologies, perform best? What is the relation between individualized, small group, class or other human interaction and machine-based learning? There is a dearth of evaluation data available which is directly applicable to the use of educational technology with the adult education student population. This information is needed as technology plays an increasing role in instructional delivery.

Proposal 14
EVALUATION OF EDUCATIONAL TECHNOLOGY

The Adult Education Institute (AEI) should design and conduct, or coordinate with other projects, ongoing evaluations of the instructional and cost effectiveness of the various educational technologies for adult education students. Possibilities for collaboration include:

- **Adding adult education sites to the evaluation project to be conducted under California's *Educational Technology Act*.**
- **Seeking joint sponsorship from the adult education divisions of the other states in Region IX of the United States Office of Education.**
- **Requesting inclusion in the Congressional Office of Technology Assessment study of the impact of technology on adult literacy.**
- **Enlisting participation from the training divisions of major corporations.**

AEI should convene a task force with representatives from the Adult Education Unit, the Chancellor's Office, the Outreach and Technical Assistance Network, a representative of the private sector, and a local practitioner with experience with educational technology. This task force should oversee the development of evaluation designs and monitor the progress of these studies.

Information from this evaluation is needed to provide a sound basis for decisions on future acquisitions and implementation of the various educational technologies. For

that reason early completion of the study is desirable. However, the project can proceed in steps. Once the designs are completed, they should be disseminated to local agencies as a guideline for their data collection. Instruction utilizing computers should be the first to be evaluated. Distance learning and other technologies can follow.

The task of evaluating instructional technologies within adult education settings should not be underestimated. Sound evaluation data will not be easy to collect. Paired treatment and control groups will be difficult to maintain with the open entry, open exit nature of adult education programs and their highly mobile student populations.

MODEL ADULT SCHOOL FOR THE 21ST CENTURY

Model schools should be established to showcase exemplary and experimental programs. Five competency based adult education demonstration sites were identified in 1988. They are now referred to as "resource centers." California's *Educational Technology Act* provides for model technology schools for the state's youth programs. Similarly, adult education needs one or more model schools to demonstrate the best of what is and experiment with technologies, techniques, and new approaches to education.

Proposal 15
MODEL ADULT SCHOOL FOR THE 21ST CENTURY

Establish one or two Model Adult Schools for the 21st Century. These schools would apply state-of-the-art techniques and technologies to serve as demonstration, experimental, training and evaluation sites for adult education. Key elements of these models schools should be:

- **Demonstrate use of most advanced technologies and experimental programs.**
- **Sites for evaluation of educational technology and alternative instructional delivery systems.**
- **Training sites for teachers and counselors.**
- **Centers for curriculum and resource development.**
- **Joint funding through state, local, project and private sources.**
- **Solicit support from providers of educational technology to sponsor model classrooms or distance learning equipment.**

These schools should test and demonstrate the most advanced resources of the future to showcase what can be done.

The most advanced technologies should be available for field trials and evaluation of effectiveness for adult learners. With the largest public adult education system in the country, California should be in good position to solicit the providers of educational technologies for joint sponsorship of these model schools. The potential for the adult market is great if the benefits of technology can be verified for the adult student population. The model schools also could be used for teacher and counselor training. Side benefits include generating knowledge about and enthusiasm for taking new technologies back to home agencies. Model schools could be paired with other agencies with similar student populations for research and evaluation studies on the benefits of the educational technologies.

TECHNICAL SUPPORT SYSTEM

New technologies should be harnessed to more effectively deliver support services to adult education instructors. California's special projects provide extensive program support through staff development, resource development and dissemination of information, products and practices. The projects currently employ technology to some degree in the delivery of services. These services can be supplemented and delivery to the field enhanced through increased use of communication technologies.

The Outreach and Technical Assistance Network (OTAN) has established the electronic communication system. The system maintains a calendar of statewide activities and electronic mail capabilities. A number of forums for special topics are established and more can be added as need is identified. A directory of resource personnel can include the certified trainers of each of the staff development projects, including the previously trained advanced staff of developers. Criteria need to be established for identifying others to be listed.

An automated information service can provide answers to frequently asked questions, *i.e.* on assessment, required state reports, or supplemental funding sources.

A variety of resources can help provide a smooth start for new instructors. Demonstration lessons delivered via videotape or laserdisc can be supported with interactive computer software to enforce understanding of techniques and concepts. Sample lesson plans, suitable for the first few days and at each level of instruction, can be accessed through the electronic forums.

Proposal 16
TECHNICAL SUPPORT SYSTEM

New technologies should be applied to improve the delivery of technical support services to the field. These technologies should consolidate resources to improve access to users through greater speed, and more flexible ways to review and deliver resources. This system should include, but not be limited to, the following:

- ❑ **Electronic communication system accessed via modem-linked telecommunications, providing:**
  - **Timely dissemination of information and resources.**
  - **Special interest group forums.**
  - **Directory of resource personnel by area of expertise.**
- ❑ **Access to statewide or regional support service centers via an 800 phone number.**
- ❑ **Resource library accessed through the electronic communication system. CD-ROM technology should be applied to digital documents and make them easily available via mail or telecommunication at nominal cost. Documents to be available should include:**
  - **Historic and policy research reports**
  - **Legislation and pertinent legal codes**
  - **Articles and newsletters**
  - **Instructional materials and resources**
- ❑ **Videotapes, software, and interactive videodisc technologies should be used to provide electronic primers for new instructors.**
  - **Demonstration lessons**
  - **Teaching techniques**
  - **Sample lesson plans**
- ❑ **Expert systems software should be developed and made available on discs or via telecommunication links. These systems should apply the principles of "artificial intelligence" to provide interactive and content sensitive advice to adult educators seeking answers to specific questions.**

The electronic archiving of resource materials from adult education's special projects and local agencies' exemplary products is being undertaken. In the not too distant future it may be feasible to distribute these resource materials, exemplary curricular materials, lesson plans, and other information that instructors need directly to provider sites via CD-ROM discs. These discs, tailored to California adult education and made available at cost, would need to be updated periodically.

Through the ability to integrate a body of knowledge with uncertainties and probabilities, expert systems software can assist in problem solving. One way this could be helpful to instructors and counselors is by factoring in language and

cultural backgrounds with entry assessment scores and student goals to help determine individualized educational plans.

TELEVISION BROADCASTING CAPABILITIES FOR ADULT EDUCATION

Television should be more effectively applied to the education of adults. Televised instruction could help provide needed educational services to California's growing adult population. Community colleges and universities currently offer televised instruction for credit. Funding for instruction by adult schools and noncredit divisions is not provided.

Proposal 17
TELEVISION BROADCASTING CAPABILITIES FOR ADULT EDUCATION

Seek broadcast outlets and funding to use television for instruction and staff development.

- **Seek legislative funding for television instruction for adult schools and noncredit divisions of the community colleges.**
- **Develop collaborations with existing instructional television agencies, public television and local cable stations for instructional broadcasts.**
- **Develop private-public collaborations for broadcast production costs.**
- **Initiate programming for instruction in ESL, elementary and secondary basic skills.**
- **Develop programming for staff training for adult educators.**
- **Secure teleconference arrangements which can be used on an as needed basis.**

Primary emphasis should be directed to securing funding for the development of programming. The public television stations at community colleges and the satellite transmission capabilities of the Los Angeles County Office of Education and the California State Universities are likely starting points to seek broadcast capabilities.

The ongoing demand for repeat broadcasts of the Los Angeles ESL series and the public television GED series provide evidence of the need for televised instruction. This programming would be beneficial for those unable to attend classes due to class overcrowding, personal illness, or problems with child care, transportation, or other barriers.

5.4 Priorities for Feasibility Study

Seventeen proposals to implement the strategic recommendation on **Program and Staff Development Support** are offered. It would not be difficult to increase that list by a like number and still not exhaust the possibilities for program improvement. It is not logical to try to move forward on all at once.

The feasibility study, the next step in the development of this strategic recommendation, will need to target those proposals with the highest priority or those with the greatest likelihood of reaching implementation without undue delay.

Proposals are grouped into three categories. Category I contains both those with the greatest potential for program improvement in the near term and those which can be implemented with either no additional or a modest increase in cost above the current level of service. Thus, both extremely high and low cost activities are included. It is recommended that proposals in Category I take priority and proceed to the next step, a feasibility study.

Category II consists of proposals which need legislative action or a major change in policy just short of legislation. Lead time is needed to build support for these kinds of changes in the legislature or other policy centers, so that work needs to be expedited. These proposals have no immediate cost factors and, thus, would not be in developmental funding competition with Category I. Two additional modest cost proposals are included here. It is recommended that proposals in Category II become a part of the 1991–1993 workplans of the Adult Education Institute (**AEI**) and the Outreach and Technical Assistance Network (**OTAN**), pending continued contractual funding for those projects.

Three high-cost technological proposals in Category III should be considered by the Interim Steering Committee for inclusion in the revision of the Strategic Plan. This would put them on a track for consideration for action beginning in approximately 1992. The remaining proposal awaits development of a new *State Plan* in 1993.

Proposal 18
PRIORITIES FOR FEASIBILITY STUDY

Proposals in Category I should be given priority and proceed to the feasibility phase of the developmental work on *Program and Staff Development Support*

Category I Proposals. **Begin feasibility study in 1990:**

(1) Staff Development Projects

(7) Adult Education Survey

(8) Curriculum Frameworks

(10) Local Technology Plans

(11) Technology Teacher Training Academy

(14) Evaluation of Educational Technology

(16) Technical Support System

Category II Proposals. **Include in 1991–1993 Workplans for AEI and OTAN:**

(2) Full-time Staff

(3) Professional Development Days

(4) Advanced Staff Developers

(5) Staff Development Fund

(6) Public-Private Collaborations

(13) Educational Technology Act

Category III Proposal. **Include in 1991 Revision of Strategic Plan:**

(9) Teacher/Counselor Grants for Innovation

(12) Software Development

(15) Model Adult School for the 21st Century

(17) Television Broadcast Capabilities

Feasibility studies for all proposals on technology should be developed in close cooperation with OTAN.

Within Category I, the development of (8) **Curriculum Frameworks** is being undertaken by the Adult Education Unit. That will continue. Responsibility for (1) **Staff Development Projects** lies primarily with projects currently in operation. Proposals (10) **Local Technology Plans** and (11) **Technology Teacher Training Academy** fall within the purview of OTAN. Currently, they do not have the funding nor mandate to implement these recommendations. The feasibility study will need to be developed with their cooperation and will need to address funding issues, possibly through a new 1991 contract or a new Request for Proposal for the Academy.

This leaves three proposals from Category I, (7) **Adult Education Survey**, (14) **Evaluation of Educational Technology**, and (16) **Technical Support System**, that will require primary attention by AEI staff in the feasibility study.

Of these Category I proposals, three (numbers 3, 7 and 14) address planning and evaluation, essential first steps to ensure success of new initiatives. For that reason, it is likely that their designation as top priority will prevail through field review and discussion. However, the suggested ranking of the proposals for early feasibility studies is advisory only. Final ranking will be determined following field review.

Chapter 6

Conclusions and Future Actions

Proposals contained in this report present opportunities and challenges to significantly impact adult education curriculum and delivery of staff development. The challenge will be to marshall the resources for implementation. Continued program quality lies in the balance.

Eighteen proposals have been made to enhance support for program and staff development. A review of the objectives of the strategic recommendation as presented in **Chapter 1** is appropriate. Those objectives are:

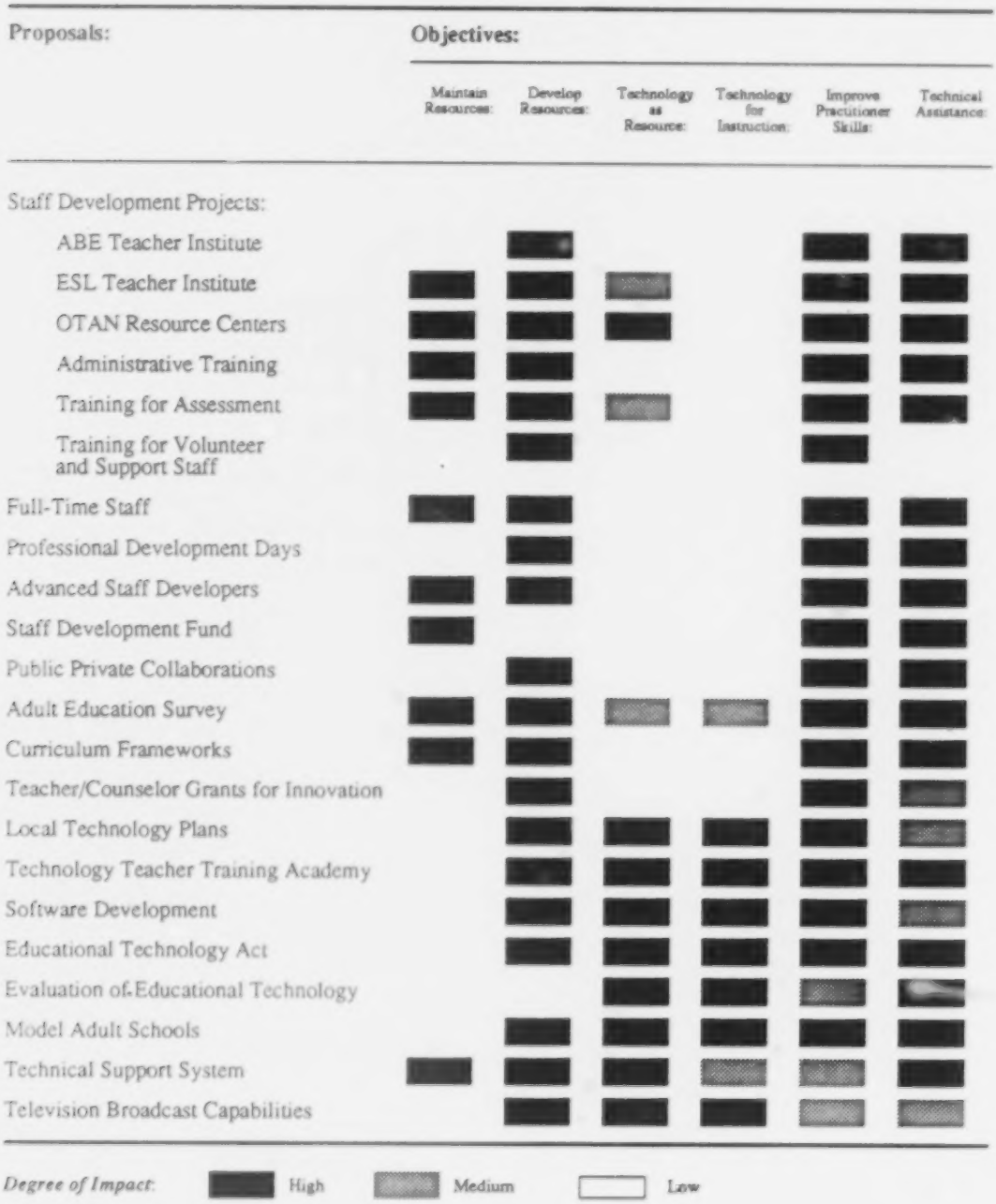
- Maintain current resources
- Develop resources in response to need
- Maximize use of technology to improve delivery of resources
- Encourage use of technology in instructional techniques
- Improve practitioner skills
- Provide follow up and technical assistance

Exhibit 6.1 demonstrates the degree to which each proposal addresses these objectives.

A majority of these proposals can be implemented within two to four years if they receive the requisite support. Nevertheless, obstacles should not be minimized, even on those that are feasible within that time frame. The proposals on technology, both acquisition and training, are expensive. Funding to implement them in a coordinated manner needs to be secured.

Other recommendations will take longer to develop and may, indeed, change as emerging technologies become readily available and affordable. For example, a reduction in costs of existing technologies and developmental efforts underway for several modes of transmission of video, audio, text and graphics may redirect thinking on both dissemination of resources and the vehicle of choice for distance learning.

Exhibit 6.1
RELATION OF PROPOSALS TO CRITERIA



Flexibility must remain the key as adult educators build their technological infrastructure.

This working paper is being submitted for field review, discussion, and direction for further action. Priorities incorporating desirability, likely feasibility, near-term efforts and long-range goals must be set as a part of that process. Those priorities need to address not only the proposals within this paper but also those that are being developed for other strategic recommendations. Written comment is invited.

After initial review recommendations will be refined and feasibility assessed. All work is subject to the approval of the State Superintendent of Public Instruction and the Chancellor of the California Community Colleges.

APPENDICES

A. Dissemination Network for Adult Education:
Exemplary Programs 1981–1988.

B. National Diffusion Network:
Exemplary Programs in Adult Education

C. California Community Colleges:
Fund for Instructional Improvement
Selected Grants, 1989–1991

D. Mini Grants:
Selected Projects on Assessment, Curriculum,
Instruction and Staff Development

E. Glossary of Terms:
Computer and Instructional Technology

F. Software Review Form and Adult
Education Software

G. Case Study: Hacienda La Puente
Corrections Education

H. Effective ABE Staff Development:
A Self Study Guide

I. California Adult Education: Special Projects

Appendix A

Dissemination Network for Adult Education Exemplary Programs 1981–1988

Burbank Adult School
BeABLEarly (ESL Plus Parenting)

Castro Valley Adult Education
After 21? Castro Valley Handicapped Program

Fremont Union Adult Education, Sunnyvale
Volunteer Training for Adult Literacy

Hacienda La Puente Adult Education
Life Skills Team Teaching
Vocational English and Basic Skills Center

Los Angeles Adult and Occupational Education
Diploma Plus—A Personalized Competency Based Adult High School Diploma Program
Watts Adult Basic Education Outreach Program, Phases I, II and III

Rancho Santiago Community College
Emeritus Program Design for Older Adults

San Diego Community College
Competency Based Adult Education Aide
Competency Based ESL Program Design
Guidelines for Selection of ESL Instructors

San Diego Community College District Foundation, Inc.
Comprehensive Adult Student Assessment System (CASAS):
- Computerized Management Information System
- Constructing Competency Based Tests
- Item Writing
- Planning for an Assessment System

San Diego County Office of Education
Career Development Center—A Master Plan for a Comprehensive Vocational Service Delivery System, Phases I and II

San Mateo County Office of Education
Basic Skills Brush-Up: Linking Basic Skills to Jobs/Group Vocational Counseling

Vallejo Adult School
Vallejo CBE/ESL Master Plan

The following programs were no longer available through DNAE after 1985. Programs were withdrawn when trainers were no longer available or when requests for adoption subsided.

Ceres Adult Education
A Vocational Education Approach to ESL

Chinatown Resources Development Center, San Francisco
Guide for Vocational Instructors Working with ESL Students
Moving Ahead: Advanced VESL
Occupation-Specific VESL Curriculum

Elsinore Adult Education
APL Gameplan for Learning
Funny Bone Family Saga: ABE Sight Reading Series

Fairfield—Suisun Adult School
Job Search Training

Fremont Union Adult Education, Sunnyvale
Vocational ESL: A Partnership with Industry

Hacienda La Puente Adult Education
Functional Reading Units for Survival

Los Angeles Adult and Occupational Education
Competency Achievement Packets (CAPs) and Life Skills Assessment System

Oakland Adult Education
Competency Based ESL Literacy Program

Palomar College, San Marcos
ESL/ABE Classroom Strategies—A Video Tape Bank

San Diego Community College
Bridging Education Levels
Microcomputer Approach to Vocational Literacy Training: The Wisher Programs
Preservice/Inservice Through Video: An Aid to Administrators

San Francisco Community College Centers
Academic Prep Curriculum
ESL Master Plan
Vocational ESL Master Plan

San Jose City College
Career Development Program for Indochinese

Santa Clara Adult Education
Adult ESL Diagnostic Reading Test

Sweetwater Adult Education
Adult Life Skills Multilevel ESL Starter Kit

Appendix B

National Diffusion Network Exemplary Programs in Adult Education

Adult Performance Level Program (APL)
(Texas)

A competency based system of education that combines the diagnosis, prescription, teaching, evaluation, and credentialing of life coping skills.

Basic English Skills (BES) Adult Literacy Project
(New York)

A reading program for functionally illiterate adults.

Comprehensive Adult Student Assessment System (CASAS)
(California)

An assessment and competency based curriculum management system with an underlying measurement scale that ranges from pre-literate through high school level.

Functional In-service Training (FIST)
(New Jersey)

An adult literacy program that uses trained volunteer tutors.

Jefferson County Adult Reading Program (JCARP)
(Kentucky)

A program to deliver literacy instruction and life coping skills instruction fully utilizing community linkages and the services of volunteers.

New York State External High School Diploma Program (EDP)
(New York)

A competency based alternative high school credentialing program for adults.

For information on these National Diffusion Network Programs, contact:

California State Facilitator Center
1575 Old Bayshore Highway
Burlingame, CA 94010
In California: 1-800-672-3494
Outside California: (415) 692-2956

Appendix C

California Community Colleges Fund for Instructional Improvement Selected Grants 1989–1991

Most of the community colleges listed below do not have noncredit divisions. Their grants are included here, however, because the projects have application to the instructional level of adult education agencies. Colleges with noncredit divisions are indicated with an asterisk (*).

College of the Desert, Palm Desert*	Core Curriculum Models for Implementation in Selected Community Colleges
Columbia College, Columbia	Columbia College Literacy Program
Compton College, Compton	VESL Machine Technology Curriculum Development Project
Foothill College, Los Altos	An Assessment of the Flex Calendar
Fresno City College	Cooperative Learning as a Format for a Developmental Math Curriculum
Gavilan College, Gilroy	San Benito County Basic Skills Curriculum
Glendale Community College*	From Non-credit Adult Education to College Credit: A Bridge to the Future
Golden West College, Huntington Beach	Pre-Vocational Program in Nursing for Nonnative Speakers of English
Los Angeles Mission College	ESL Comprehensive Resource Delivery System
Los Angeles Pierce College	Computer Assisted Writing Improvement for the Hearing Impaired
Los Angeles Pierce College	Vocabulary Development for Vocational English as a Second Language Students
Los Angeles Trade Technical College	Amalgamation of ESL with Vocational Instruction in Occupational Programs

Los Angeles Trade Technical College	Center for the Advancement of Teaching with Technology
Los Medanos College, Pittsburgh	Tutor Training Dissemination and Evaluation Project
Mira Costa*	Computer Mentor Teachers
Modesto Junior College	Writing Development Center
Pasadena City College	Teacher Training Workshops: Literature in ESL Classes
Sacramento City College	Extending the Concept and Practice of Classroom Based Research to California Community Colleges
Santa Barbara City College*	Instructional Strategies for Improving Student Learning and Retention
Skyline College, San Bruno	Accelerated English Acquisition for Nonnative Speakers
Skyline College, San Bruno	Computer Assisted Developmental Writing
Solano College, Suisun	Integrating Learning Laboratory Materials Development Project
Southwestern College, Chula Vista	Instructional Improvement Lab: Communication Skills
Yuba College, Marysville	Literacy Skills Project

Appendix D

Mini Grants
Selected Projects on Assessment, Curriculum, Instruction and Staff Development

The following is a partial list of those Mini Grants which were accorded exemplary ratings by a team of practitioners. Unit and level exit assessment projects are included here because of their summative role in curriculum and instruction. On that basis, projects dealing with placement are not included. Similarly, all other topics (for example, recruitment or follow-up activities) are not included here. At the conclusion of this partial list of exemplary projects are other agencies which had one or more Mini Grants. All persons receiving Mini Grants participated in round table discussions at the annual CBAE conference 1985-88.

ABC Unified, Cerritos

- Instructional Improvement Using TIP

Alhambra Adult Division

- Beginning Reading Exit Test
- Teacher Resource File for CASAS Competencies
- TIP Staff Development

Bellflower Adult School

- Competency Based Writing for Intermediate Level ESL

Centinela Valley Adult School, Lawndale

- Integrating Grammar Guidelines with Life Skill Competencies

Fairfield-Suisun Adult School

- Geriatric Aide Training Program

Fremont Adult Education, Sunnyvale

- How to Design and Implement Effective In-House Staff Development
- Parent/Child ESL Class Manual
- Teachers Observing Teachers
- Training CBAE Volunteers

Fullerton Unified School District

- Applied Performance Unit Tests for Beginning ESL Students: A Game Approach

Glendale Community College

- English for the Older Adult
- Instructional Materials for Functionally Illiterate ESL Students

Hacienda-La Puente Adult Education, La Puente

- Applied Performance Measures Manual (In cooperation with Sequoia Adult School)
- Auto Mechanics, Welding, Machine Shop Safety Video
- ESL Students at Correctional Education Sites
- Government and Law Lesson for ESL Students
- Life Skills Packets of ABE
- Microcomputer Software Articulation Project
- Organization and Implementation of Level Exit Tests for ESL
- Video Exit Level Test: CASAS Listening Items Translated to Sign Language
- Vocational Literacy Volunteer Linkage

Jefferson Adult Education, Daly City

- Adaptable CBAE Master Plan

Merced Adult School

- International Restaurant Handbook

Metropolitan Adult Education, San Jose

- Using Mentor Teachers/Staff Development
- Using the TIP for Instructional Improvement
- Volunteer Training Program

Mira Costa College, Oceanside

- ESL Exit Level Tests

Mission Language/Vocational School, San Francisco

- VESL Video Staff Development

Mount Diablo Adult Education, Concord

- Small Group Study Trips

Mountain View/Los Altos Adult School

- ESL Teachers Peer Coaching

Neighborhood Centers, Oakland

- Applied Performance Testing for ESL Students
- Using Volunteers for Applied Performance Testing

Pomona Adult and Continuing Education

- ESL Pre-Literate Curriculum & Documentation

Rancho Santiago Community College, Santa Ana

- Cultural Competencies ESL/ABE Students
- Improving Instruction Through Peer Coaching

Redlands Adult School

- Instructional Strategies

San Diego Community College Continuing Education

- CAI into English Skills Program
- CAI into Math Skills
- CAI into Reading Skills Program
- Competency Based Lesson Modules for Use by Literacy Volunteers and Low-Level ABE Students
- Designing a System to Meet Individual Student Needs
- Evaluation of Modified Lesson Modules for Non-Literate ESL
- Evaluation of TIP as a Tool for Implementing Instructional Improvement
- Integrating Intercultural Communication into VESL Instruction
- Peer Coaching
- Training Packets for Substitutes

San Francisco Community College Centers

- Advanced ESL Oral Exit Interview

Santa Clara Adult Education

- Empowering Students by Giving Classroom Experiences in Democratic Processes

Santa Cruz Adult School

- ESL Teacher CBAE Handbook

Sequoia Adult School, Redwood City

- Applied Performance/Level Exit Tests
- Determining Competency Needs Beginning ESL Students
- Teacher's Resource Book for Intermediate ESL Classes
- Using CASAS Tests to Assess ESL Instructional Techniques

Vallejo Adult School

- Picture Needs Assessment File

Watsonville/Aptos Adult Education

- Store and Shop Simulations

YMCA of San Francisco/Refugee Services

- Developing and Implementing a Self-Assessment Model

Mini Grants generated widespread participation among adult educators. In addition to the partial list of agencies developing exemplary projects, personnel from the following adult education programs were awarded one or more Mini Grants from 1984–88. A total of 326 projects were completed by the two groups of agencies during that time.

Acalanes Adult School, Walnut Creek

Agnews Developmental Center, Santa Clara

Baldwin Park Adult School

Bellflower Adult School

Capistrano Adult School

Castro Valley Adult Education

Chaffey Adult School, Ontario

Clovis Adult School

College of Marin, Kentfield

Compton Adult School

Conejo Valley Adult Education, Thousand Oaks

Dayle McIntosh Center, Anaheim

Downey Adult School

El Monte-Rosemead Adult School

Eureka Adult Education

Fremont Adult School, Fremont

Grant Adult Education, Sacramento

Grossmont Adult School, La Mesa

Hayward Adult School

Indochinese Refugee Project, Mendocino

Inglewood Community Adult School

International Institute East Bay, Oakland

Long Beach City College

Los Angeles Adult and Occupational Education

Manteca Adult School

Montebello Adult Education

Monterey Adult School

Morgan Hill Adult School

Napa Valley Adult School

Palm Springs Adult School

Palo Alto Adult School

Paramount Adult School

Placer School for Adults, Auburn

Sacramento City Adult Education

Salinas Adult School

San Juan Adult Education, Carmichael

San Leandro Adult School

Sweetwater Adult Education, Chula Vista

Torrance Adult School

Tulare Adult School

Yucaipa Adult School

Appendix E

Glossary of Terms
Computer and Instructional Technology

Source:
Dennis Porter
Micro Methods
Berkeley, California

GLOSSARY OF COMPUTER AND INSTRUCTIONAL TECHNOLOGY TERMS

Applications Software

This is the software which carries out particular applications or uses like word processing, database management, accounting, or spreadsheets. It gives the computer a personality.

Artificial Intelligence (AI)

AI is essentially a set of software technologies which solve problems much in the way humans (supposedly) solve them. Currently there are four areas of applied AI - expert systems, natural language systems, visualization systems, and robotics. Expert systems and natural language systems are of current interest to instructional technology developers.

Authoring System

A software application which permits the instructor or curriculum resource person to design instructional lessons or modules. Authoring software can be very inexpensive or expensive. The more expensive software permits the integration of graphics and even sound into the application. Multi-media authoring software is available to link computer and video-disc media into an interactive system.

The next major advance in instructional software will permit the merging of text, audio, video, and graphics images into linked digital forms, which can be edited. All of the information will be in the form of bits and bytes and capable of computer based manipulation.

Bit

A bit is the smallest unit of information that a computer can use. It stands for "binary digit" and is either a 1 or a 0. Bits are combined to form letters, numbers, symbols, and instructions.

Byte

A byte is a combination of seven or eight bits which makes one character (letter, number, symbol). When we analyze file size, we think in terms of bytes or the number of characters in a field, file or database.

Information storage requires lots of bytes and the terms "K" (kilo) bytes refers to 1,024 bytes and "M" (mega) bytes refers to 1,240,000 bytes.

An easy way to get a sense of relative byte size is to compare the approximate page length by the number of bytes. For example:

100K bytes = 50 pages
200K bytes = 100 pages

Code

The organized instructions in a computer program. Code can be of a higher level - which is peculiar to the applications software (C, Cobol, Basic are examples) or lower level which is able to be read by the computer (assembly language).

Code Generator

A English like set of instructions and examples which permits programmers and non-programmers to generate higher level code without knowing the programming language.

Computer Assisted Instruction (CAI)	There is a conceptual overlap between CAI and CBI and they are often used interchangeably. For our purposes we define CAI as the use of computers as an instructional aid, where lessons or tutorials can be used at individual learning stations to supplement classroom instruction.
Computer Based Instruction (CBI)	Computer based instruction, in our definition, is using the computer as the central feature in teaching a particular module or lesson. In this case the instructor supplements the computer based lesson with classroom materials. In other words the emphasis is on the computer instruction rather than the classroom instruction is with CAI.
Compact Disc (CD)	A compact disc is a flat, plastic disk that holds digital information. The information is read with the disk is played on a CD player. The player reads the disk with a small laser beam and sends the information to either an amiplifier (CD audio) or a computer.
Compact Disc Interactive (CD-I)	CD-I is an exciting extension of CD-ROM which permits the combination of text, color, audio (multiple channels), graphics, and animation into one storage medium. The CD-I, using a sophisticated compact disc player, can interact directly with a TV via a joy stick or mouse to provide interactive entertainment, education and informational resources. The drawbacks to CD-I, in its initial publishing stages, are its very expensive disc creation and mastering costs and the costs of the CD player. This may limit its value as an instructional medium for some time.
Compact Disc Read Only Memory (CD-ROM)	CD-ROM is an optical digital disc like the audio compact disc that can store huge amounts of text, graphics, audio and, in the near future, video. This medium is especially useful for storing large amounts of information (archiving) and resource documents (census, encyclopedia, dictionaries). The limitation is that the information can be only written once to the media. Second and later generation compact discs (CD-I), CD-WORM, DV-I) will be able to store video images for efficiently and can be rewritten like a computer disc.
Computer Managed Instruction (CMI)	CMI is the use of computers to pretest competencies, select learning levels, instruct, and measure comprehension of particular areas of learning. CMI can be essentially a computer based classroom in which the instructor plays a coaching, tutorial and individualized instruction role. How the instructor interacts with and can use CMI creatively is of particular interest.
Computer Memory	There are two kinds of computer memory - fixed and temporary. Fixed memory resides on a floppy disc, a hard disc, or memory chip that can store information indefinitely. Most microcomputers now have at least 20 MB of fixed memory. With the advent of graphics and more powerful computers the requirements for fixed memory are increasing.

Temporary memory is the random access memory (RAM). This is the memory the CPU uses to carry out internal operations and software application instructions. This memory will be erased when the computer is turned off or when other software commands are invoked. When word processing software is used, the programs which permit it to operate are stored in the RAM as needed. The file you are creating must be saved to fixed or disc memory if you want to save it to use again.

Courseware — Applications software used for specific computer related instruction.

CPU — Central Processing Unit - is the part of the computer that does the processing of information.

Database — A database is a collection of information organized for a specified purpose and organized in a way that makes the information easy to find. A simple database is a mailing list like the following.

Name	Address	City	State	ZIP	Phone No.
Florentino Castellon	8245 Roadhouse	Sacramento	CA.	95823	916/442-3318
E. Klasen	POB 541	Sebastopol	CA.	94709	707/234-1234
Jo Ann Intili	2725 Rich St.	Menlo Park	CA.	92707	415/667-2340

The rows in a database file are called "records" and the columns are called "fields". Each field is a variable which can change with each record. If you want to find the phone number of a person simply find the name and read across to the related phone number.

Some database software manufacturers refer to a file as a "table" with rows being the records and the columns being the fields. Also a spreadsheet is a file or table with rows and columns.

A database that draws information from different files or databases linked by a common field is called a relational database. This relation can occur across several files which can be linked for various types of data processing and reporting.

There are two major categories of data - alphanumeric and numeric. Alphanumeric data can contain alphabetic characters (A - Z, numeric digits (0 - 9) and special characters like # and $. Numeric data can only contain numbers and is used in calculations.

Data types include currency, dates, time. Dates can be used to compute intervals.

[terms used with databases include records, fields, tables, spreadsheets, alphanumeric and numeric]

Digitized Sound — Audio signals that are turned into binary code that can be stored on a computer and played back with absolute fidelity.

Digital Video Interactive (DVI)	DV-I is a second generation version of CD-ROM which uses a optical digital disc as the storage medium for digital multi-media. Its virtue is that it can efficiently store and play large amounts of video (which when digitized requires huge amounts of storage memory) permitting exciting possibilities for mixing text, audio, video, graphics and animation. It is just coming on the market.
Disc or Disk	A round platter with a coating similar to a recording tape on which computer information is stored in the form of magnetic impulses. This information can be rewritten multiple times. The disc is also referred to as a "floppy disc" or "floppy" and usually come in 5.25 inch and 3.5 inch sizes.
Disc Drive	A devise that reads information from and writes information onto discs.
Expert System	Expert systems (ES) mimic the decision making and problem solving thought processes of human experts. ES uses a set of methods and programs which define and solve complex problems that involve (1) information or knowledge, (2) rules of thumb (heuristics), and (3) uncertainty. The ES also has been described as knowledge intensive programs that solve problems normally requiring human expertise.
Fileserver	A computer, usually quite fast, with a large fixed memory capacity which serves as the host for a local area computer network (LAN) or multi-user computer system. Software permits the interaction between the host and the respective computers.
Hard Disc	A high speed, high capacity, fixed disk that can hold from 10 to 160 megabytes of information or more.
Hypercard	A unique program that is used on the Macintosh computer to make and run applications for storing and accessing information.
Hypermedia	The multimedia equivalent of hypertext wherein a contextualy linked "corpus" or body of text, static and animated graphics, sound, music and video are formed into a complex web of information.
Hypertext	A concept and procedure which permits the linking of nonlinear reading and writing for annotating and connecting ideas. A hypertext system allows authors or groups of authors to link information together, create paths through information files, annotate the text, and create notes that point readers to referenced information. For example, in a computer based hypertext system, the user can follow a series of footnotes to examine linked information sources.
Icon	A graphic representation, usually of a file, a folder or a disc.
Initialize	To prepare a computer disc for use. If it contains prior information, initializing will remove it.
Integrated Services Digital Network (ISDN)	The combining of voice, data, and video signals into one common carrier. This early 21st century technology will completely blur the roles of TV, computers, and telephones creating a digital forms of information exchange.

Intelligent Computer Assisted Instruction ICAI	In contrast to CAI which requires intuitive ideas about learning, ICAI uses artificial intelligence and learning strategies which utilize higher level (cognitive) learning skills to diagnose, instruct and motivate the learner.
Knowledge Engineering	A process by which a class of computer programs called expert systems are created to aid or perform tasks which are very knowledge intensive, typically require inexact and imprecise reasoning and for which expertise for performing the task resides with a few experts. The implication for computer based or managed instruction is that expert systems can be embedded in instructional software to carry out diagnostic, multi-level instructional or motivational activities which will enhance learner interaction with the software.
LCP Projector	Liquid crystal display that allows information to be projected onto a screen from a computer source.
Local Area Network (LAN)	The combination of cabling and software which permits stand alone microcomputers or to pass information and share software. The increased speed, graphics and memory of microcomputers permit them to serve as inexpensive work stations as well as carry out their own activities. The core computer in a LAN is known as the fileserver since much of the shared application software (database and accounting are the best examples) will reside only with it.
Macro	A computer command that incorporates two or more other commands. Macros are used to speed up the entry of often used terms or code.
MIS	The management information system (MIS) is the systematic organization of management data and analytic procedures to produce summary information on organizational activities. A good MIS makes it easy for executive and administrative personnel to access appropriate information to monitor progress in meeting their goals and objectives.
Minicomputer	A powerful computer about the size of a small refrigerator that allows multiple terminals or personal computers to be connected to it and used at the same time.
Modem	A communications device which switches digital (computer) signals into analog (telephone) signals and vice versa. It stands for modulator - demodulator. It is used to send computer files over phone lines to other computers.
Motherboard	The main circuit board of a microcomputer. The motherboard holds the central processing chip, the memory and other essential elements of the computer architecture.
Multimedia	A new technology-based medium for thinking, learning and communication. Computer supported media combine text, audio and visuals (still images, video and animation/graphics) with optical storage to produce simulations, talking books, tutorials, and interactive instruction in a dynamic multimedia environment.

Operating System	This is the set of software instructions which operates the routine aspects of the computer like communicating between input devices (keyboard or mouse), the central processing unit (CPU) and the output devices. When the computer is turned on a portion of the operating system is automatically loaded into the computer's RAM, permitting it to recognize other commands. Software must be designed to run on specific operating systems. It is the incompatibility of the operating systems which results in software being incompatible with certain computers. While some persons think in terms of computer manufacturers, it is actually the operating system which determines what software can be used. MS-DOS and PC-DOS are operating system designations for stand alone IBM and IBM clone microcomputers.
Optical Character Recognition	Software that interprets a printed text image sent to the computer from a scanner and turns it into readable text and graphics.
Peripheral	A peripheral is an input (keyboard), viewing device (monitor or terminal), or output device that works with the CPU like a modem, a printer or plotter.
Program	A set of software instructions (code) which carries out a set of computer functions. All software is based on a set of integrated programs. The program instructions can be interpreted by the computer, enabling it to carry out the instructions.
Processing Speed	Computers process information in chunks, a 16 bit microcomputer like the IBM XT can process two characters of information at a time (16 divided by 8 bits). A 32 bit computer like the Macintosh or IBM AT can process three characters of information at a time, thereby being able to process information faster.
Program	A set of software instructions (code) which carries out a set of computer functions. All software is based on a set of integrated programs. The program instructions can be interpreted by the computer, enabling it to carry out the instructions.
Query	A query is a (usually) English language like typed request of a computer program to obtain specific information. Its purpose is to let casual computer users obtain information, usually from databases, without having to know the software program. An example query is "Give me all the March 1989 sales more than $10,000 in all regions".
Random Access Memory (RAM)	The computer memory used to run applications software. This memory is temporary and is erased when the computer is turned off or when other software is used. It is important to remember than any valuable information in RAM should be stored to fixed (disc) memory in order to save it.
Read Only Memory (ROM)	Computer memory on chips which cannot be erased nor overwritten. ROM is used for key parts of the internal computer operating software, although there is no reason that the central components of applications software could not be used in ROM form.
Sampled Sound	To sample sounds is to essentially digitize sound. Many digital keyboards use sampled sounds which are stored digitized sounds from real instruments.

Scanner	An input device, that along with other software, digitizes printed images and text and stores them on a computer in a form that can be edited and combined with other images and text.
Software	This is the set of computer recognizable programs (instructions) which permits the computer to carry out a set of specified routines.
Synthesized Sound	Sound constructed in a set of rules by a computer or synthesizer. Synthetic speech is familiar to many people as it sounds like a robot rather than a real person.
Technology	The systematic application of scientific or other organized knowledge to practical tasks. An important implication of technology is forcing the division and subdivision of work into component parts which leads to specialization. Technology both drives and is driven by economic change.
Workstation	A computer terminal or microcomputer with sufficient speed and graphics capability to carry out routine scientific, technical or analytic tasks.
Write Once Read Many (WORM)	A fixed memory compact disc which can be written to as well as read. The advantage of the WORM over the CD-ROM is that information can be added, making it an ideal medium for a computer fixed memory, and archiving data or databases information. It will be able to store upwards of 600 Mbytes of information (300,000 pages) and this amount will grow. The next generation WORM technology will be rewriteable compact discs. They have been announced but are not on the market. They may become the primary fixed storage medium in the next generation of microcomputers.

Appendix F

Software Review Form and Adult Education Software

Source:
John Fleischman
Hacienda La Puente Adult Education
La Puente, California

ADULT EDUCATION
SOFTWARE REVIEW FORM

SUMMARY REVIEW

Program _____

Publisher _____ Year _____ Cost _____

Operates on: Apple ____ TRS ____ IBM/compatible _____

PET ____ Atari ____ Other _____

Format: 5" diskette ____ 3" diskette ____ No. of Disks ____

Memory required: ____K

Peripherals required: Printer ____ Second disk drive _____

Joystick ____ Mouse ____ Other _____

Program description: _____

Appropriateness for Adult Students:	GOOD	FAIR	POOR
Appropriate for adult education	____	____	____
Free of cultural bias	____	____	____
Can fit into CBAE curriculum	____	____	____
Instructional design quality	____	____	____

Comments _____

Opinion: ____Highly recommend ____Usable

____Good ____Not recommended

Evaluation Criteria

Type of Program

____Drill/Practice	____Demonstration	____Spread Sheet
____Tutorial	____Problem Solving	____Management
____Simulation	____Data base	____Utility
____Game	____Word processing	____Other

Design

Yes	No	N/A	
___	___	___	Screen display is easy to read.
___	___	___	User can easily understand directions.
___	___	___	Program is menu driven.
___	___	___	User can re-try or correct entries.
___	___	___	User eventually gets correct answer.
___	___	___	User can exit program without completion.
___	___	___	Motivators are appropriate for adult students.
___	___	___	Program allows for active student involvement.
___	___	___	Documentation (teachers' guide) is easy to understand.
___	___	___	Program branches to student level.
___	___	___	Program utilizes student recordkeeper

Educational Value

___	___	___	Instructional objectives are clearly stated.
___	___	___	Program is compatible with other adult education materials.
___	___	___	Content is factual.
___	___	___	Minorities are represented.
___	___	___	Program emphasizes thinking.
___	___	___	Program emphasizes application of basic skills to life skill.

Other Comments:

_____

_____

_____

_____

Skill Development

Life skill competencies (CASAS):

Skill: ( ) - Sub skills: _____

Skill: ( ) - Sub skills: _____

Skill: ( ) - Sub skills: _____

Skill: ( ) - Sub skills: _____

"List of Lists"
Adult Education Software Guides

Compiled by: John Fleischman
April, 1989

Computers in Adult Education: A Planning Guidebook
Mass. Department of Education
Bureau of Student, Community and Adult Services
Merrimack Education Center
Adult Education Computer, Applications Project
101 Mill Road
Chelmsford, MA 01824
c1983
Description:
Identification of essential planning activities including a description of steps to follow in developing and implementing computer assisted instruction at a local site.

AB/CE Adult Basic and Continuing Education
Computer Courseware Evaluation
Recommended Software for Adult Learners in AB/CE
Bemidji AB/CE
North Centeral Consortium
Bemidji, Minnesota
Minnesota Department of Education
c1986
Description:
Identification of high quality AB/CE microcomputer software through user assessment instruments and student field testing.

Evaluation of Microcomputer Software for ABE/GED Basic Skills Instruction
Maureen S. Williams
Luzerne Intermediate Unit 18
368 Tioga Avenue, Kingston, Penn. 18704
(717) 287-0702 ext 215
c1987
Description:
Comprehensive list of microcomputer software, along with evaluations, that may be beneficial to others seeking assistance in initiating a resource center for computer assisted instruction.

Software Evaluation - Computer Training Initiative 1985-86
Division of Corrections - State of Wisconsin
Dr. Judith Rodenstein
964 Educational Sciences Building
1025 W. Johnson Street
Madison, WI 53706
(608) 263-4367
c1986
Description:
Evaluation of software used in the Wisconsin prisons system as a part of the federal Computer Training Iniative.

Post-Evaluation of Sotware - Computer Training Initiative 1985-1986
The Vocational Studies Center
University of Wisconsin-Madison
964 Educational Sciences Building
1025 West Johnson Street
Madison, Wisconsin 53706
(608) 263-4367
c1986
Description:
Classroom based software evaluations conducted with a variety of students.

Microcomputer Bibliography for ABE/GED Basic Skills Instruction - 2nd Edition
Lois Gilliland
North Central Technical Institute
Wausau, Wisconsin
The New Jersey Adult Education Dissemination Project
Office of Adult Continuing Education
c1986

Lois Gilliland
Developmental Services Supervisor
1000 Campus Drive
Wausau, WI 54401
(715) 675-3331
Description:
Annotated bibiography of microcomputer software along with reviews of computer hardware used in the project. Includes list addresses for ordering materials.

Literacy For Every Adult Project (LEAP) - Report of Learning Center Component
Richmond Public Library
325 Civic Center Library
Richmond, Ca 94804
(415) 620-6565
Sharon Pastori, LEAP Project Director
c1985
Description:
Evaluation of microcomputer hardware and software used for teaching adult basic skills in a library based literacy program.

Adult Literacy & Technology - Guide To Recommended Literacy Software 1989 Edition
Adult Literacy and Technology Project
c/o PCC, Inc.
2682 Bishop Drive, Suite 107
San Ramon, CA 94583
Description:
Extensive evaluations of software appropriate for use with a range of adult basic education students.

Sotware Buyer's Guide
Region X - Adult Education
Software Consortium
Attention: Annabelle Lavier
Consortium Coordinator
Treaty Oak Community College Service District
400 East 4th
The Dalles, Or 97058
c1987
Description:
Student based evaluations of adult appropriate computer assisted instructional software.

Adult Basic Skills - Curriculum Software Guide
Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, CA 95014
(408) 996-1010
c1988 Apple Computer, Inc.
Description:
Highlights some of the best software for adult students who need to learn basic skills.

English as a Second Language - K-12 - Education Solutions Guide
Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, CA 95014
(408) 996-1010
c1987 Apple Computer, Inc.
Description:
Listing and description of software that ESL educators have found useful with their students.

A Guide to Macintosh Educational Software
Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, CA 95014
(408) 996-1010
c1987 Apple Computer, Inc.
Description:
Listing of educational software that will operate on an Apple Macintosh computer.

Interactive Videodiscs - A Directory for Educators
Merrimack Education Center
101 Mill Road
Chelmsford, MA 01824
(617) 256-3985
Description:
A resource guide that provides a description and listing of:
videodisc programs
videodisc players
interfaces
authoring systems/languages
custom audio
multi-function hardware packages
organizations/books/journals

The Apple Guide to Courseware Authoring
Apple Computer, Inc.
20525 Mariani Avenue
Cupertino, CA 95014
(408) 996-1010
c1988 Apple Computer, Inc.

Appendix G

Case Study: Hacienda La Puente Corrections Education

Case Study Objectives

In California, there are close to 200,000 persons behind bars. Less than ten percent of them receives educational services. National data indicate that 50% of adults in state and federal prisons cannot read or write at all.[1] The dysfunctions caused by lack of inmate skills and education, combined with substance abuse, low self esteem and other problems pose a national problem that is being minimally addressed. These highly structured settings offer special educational constraints and challenges that cry for new solutions. Educational technology, properly used, can have an impact on these limitations. This case study examines an exciting and unique example of how technologies are helping meet this challenge.

The Environment

The Hacienda La Puente Unified School District, through its Corrections Education Division, provides basic and vocational education services to inmates at ten Los Angeles County jail facilities. The Division has created a Media Services Department which assists instructional personnel in identifying needs and uses for video tapes, computer based instruction, and multimedia instruction.

The Los Angeles County Jails are located in urban and rural parts of the county and range from almost camp-like settings to the traditional grim, secure, limited mobility high security sites. More than 23,000 people are locked up in these jails. The Men's Central Jail in downtown Los Angeles incarcerates some 7,000 men.[2] It is the largest jail in the free world. These jails are typically overcrowded with new facilities being built. They include two women's jails, Sybil

[1] John Fleischman, Administrator, Media Services, Corrections Education Division, Hacienda La Puente School District, in testimony to the California Legislature on Work Force Literacy. 1989.

[2] Fleischman, Op. Cit.

Brand Institute and Mira Loma Women's Facility, and both minimum and maximum security facilities.

The jail population is made up of persons serving different amounts of time for many different reasons. Some persons serve specific sentences for violations ranging from minor drug charges to manslaughter. These sentences may be reduced due to jail overcrowding. Some pretrial detainees serve several days to several weeks while awaiting trial or release from custody. Some inmates have been sentenced to state prison and will be transferred to state facilities at an unknown date. Over the course of a year, approximately 175,000 of these prisoners enroll in classes. The differing circumstances and amounts of time to be served by inmates, and the transferring of inmates between jail facilities present special diagnostic, scheduling and instructional problems for corrections education staff.

All basic education is open entry—open exit with substantial turnover. Vocational courses and basic education services are offered in two or three time periods (morning, afternoon, and at some sites ABE/ESL in the evening). The general recruitment procedure is to periodically announce (weekly or biweekly) in the cell blocks or "modules" that there is "school" available and to check it out. Depending on the inmates' work requirements (all sentenced persons are assigned eight daily hours of work) and institutional constraints, sentenced inmates or those waiting to transfer can attend classes or courses in their available time. Pretrial detainees are more likely to attend shorter, informational classes like parenting and health education. In all cases, the inmate must volunteer for the education.

Many inmates are initially reluctant to participate in education. For non-English speakers, for example, simply getting the sign-up information, custodial approval, and filling out the requests is complicated and can be haphazard.

At entry, inmates are given simple assessment tests including CASAS to determine their learning level. Those with very low skill levels are assigned to basic education or ESL. Individuals who wish to prepare for their GED or high school diploma (the Division is accredited to award high school certificates) do so under independent study programs given in the housing units or in centralized learning labs. Sentenced inmates can go directly to vocational education if they wish, providing they meet Sheriff's criteria and there is space available. The length of vocational training varies, but up to 1,400 hours can be provided.

Twenty four vocational education and preapprenticeship courses are available, as well as JTPA sponsored skill training and employment development programs. The JTPA services include job search training and job development classes

Employer tax credits can be gained for placements. Persons leaving the JTPA program have a professional resume and history of training activities to show prospective employers.

The process can be diagrammed as follows:

Exhibit 1
CORRECTIONS EDUCATION
CLIENT FLOW

Advertise Educational Services
▼
Assessment
▼
- **Basic Education**
- **ESL**
- **Independent Study—**
  GED/HS Certificate
- **Health/Parenting Education**
- **Vocational Education**
- **JTPA**
- **Preapprenticeship**

▼
- **Vocational Education**
- **JTPA**
- **Preapprenticeship**

Inmate education settings are always in flux because of the unpredictability of inmates' free time, the mix of persons coming, going, and being transferred, and the initial ambivalence of some inmates about participating. Learning which is tailored to the individual through a wide variety of services and materials is especially useful in this case. Educational technology therefore plays a central role in supporting the instructor.

The Uses of Educational Technology

The Media Services Department consists of eleven professional—technical staff who provide video and computer based materials to instructional and administrative staff. These materials include:

- microcomputer, video, laser disk and audio courseware review and purchase in coordination with the Academic Administrator;
- video production for ABE, ESL and vocational classes;
- educational software authoring using computer and multimedia technologies;
- planning, purchase, and installation (plus training) of administrative and educational hardware and software; and special video projects.

SOFTWARE REVIEW

Each basic and vocational education course has an outline which sets standards and procedures for instruction. Within each course are units of instruction which order and break down learning into modules. Student achievement is based on mastering the modules. Because of the open entry—exit procedure, a student in vocational education can enter any of the modules, preferably at the start.

The availability of appropriate educational materials for ABE, ESL and vocational education varies substantially, especially for a largely minority population. Each jail has one or more learning settings, with separate settings for maximum security, vocational education and ABE/ESL. The ABE/ESL settings often combine classroom space divided into ABE, ESL and individual study sections and a multimedia lab. The labs are equipped with both small screen individual VCR learning stations and group size TV and VCR players used to display video based material. Each lab has several generations of Apple computers and one or more Macintosh Plus microcomputers. One MAC is linked with a laser disk player, permitting interactive and multimedia learning. The ABE/ESL settings also have audio tape stations used in ESL and very basic education.

The Academic Administrator and the Media Services Administrator have a clear-cut set of procedures to routinely

review media for possible use in the various courses. These evaluations are linked to the modules in particular courses. Material sources come from instructors, vendors, other software reviews and catalogs. Obvious gaps not filled by the market place become priorities for materials developed in-house. Current emphases includes employability skills, ESL, low level reading and applied math, and health education materials.

VIDEO PRODUCTION FOR ABE, ESL AND VOCATIONAL EDUCATION

The major thrust of the Media Services Department is video. Department staff includes five video producers. The Division has advanced and technically sophisticated video production facilities including four edit bays, two AB roll units, digital effects production, and the ability to produce and edit 1/2- and 3/4-inch videotape. In the past five years, the Department has produced 75 video tapes for the Division and public sector clients. In addition, the Department has produced 150 single-concept vocational education tapes which visualize specific curricular information. These materials, referred to as the "quick and dirty" tapes, often are produced for an individual instructor.

During the field visit, the evaluator sat in on a class presentation of a video tape on addicted babies entitled ***What Mother Gets—Baby Gets***. This second in a three part series for parenting classes is a powerful, moving presentation and discussion of the effects of the mother's drug use on the fetus and the child. This video was shot at the women's jail, the Sybil Brand Institute. Shown to a men's parenting class at the Hall of Justice Jail, it provoked an insightful and personal discussion of the responsibilities of the father during pregnancy and what can be done *post hoc* to help the baby.

A series of videos are being produced for the ESL Institute, a statewide ESL support institute. ESL suffers from the lack of video and computer based materials.

EDUCATIONAL SOFTWARE DEVELOPMENT

also chairs the National Adult Literacy and Technology Project, was also aware of the general dearth of appropriate software. He decided to begin developing their own products with an eye towards integrating them with video materials.

In the summer of 1988, a part-time person was hired to begin development of instructional software. The authoring system chosen was "Best Course of Action" by Authorware, Minneapolis, MN. This advanced, but easy to use software has a video interface, animation features, multiple branching and nesting capabilities, and an audio (voice) feature for including digitized speech. These features permit the development of software that combines text, graphics, audio and video into the learning materials.

Two products have been developed that link to video disks. The first is the "Learning Styles Survey" that combines a disk from the Piedmont Community College with MAC text and graphics aimed at the jail population. The purpose is to identify the user's learning style and to get the user to recognize that there are multiple ways to learn. The second is on AIDS. It combines a laser disk from a commercial vendor and adds text, graphics and examples which are geared to a less educated population. This product, being beta tested, deals with an educational subject crucial for the jail population, and is a useful compromise between a comprehensive, but inappropriate, video disk (costing $1,000) and the need to scale the examples, materials and learning for inmates.

The authoring software permits the developer to link to specific segments of the laser disk during instruction. A wide range of subject matter can be reinforced by video-based information with audio. For example, the AIDS video includes eight subject areas that the user can review. At the conclusion of each subject area a test is given on the information. Short video segments could be replayed when questions are answered wrong. How interactive and complex the media uses are is entirely up to the authors. Front end testing or options can even provide graduated presentation of learning material.

The Media Services Department has created also a vocational education "template" which combines graphics and text to explain the tools for each vocational education area. This template enables an inmate, at a computer, to review the tools' names and purposes with visual, graphic examples. This template design will standardize the development of Department software.

While Department software development is still in its early stages, it shows promise in leading the curriculum towards a more thoughtful, multimedia use of technology. A math game using graphics has been developed to make elementary math more interesting and challenging. Other software is being planned. A recent JTPA 8 percent grant for $75,000 will

underwrite the development of twelve ABE software products. Planning and priority setting will begin with the Academic Administrator in the spring of 1989. The possibility of porting these products to MS DOS microcomputers is being explored.

PLANNING, PURCHASE, AND INSTALLATION OF ADMINISTRATIVE AND EDUCATIONAL HARDWARE AND SOFTWARE

In the summer of 1988, the Media Services Department networked MAC computers for the Division's central office. Twenty MAC's were linked via a local area network (LAN) to a fileserver, permitting them to access the same software and to share high quality printers and electronic mail. Now, clerical, professional and administrative staff check a computer on their desk to get messages or memos. Those with computers at home can call the system to read or write messages to one or more persons. This is a major step towards office automation. All staff received two-day training immediately prior to the computers being installed.

A link between the Division's LAN and the School District's VAX computer has been recently implemented. This permits the Division to transfer inmate educational file and administrative (payroll and budget) information directly to and from the mainframe.

The next step is to create a network with the Division's main office and the educational offices at the jails. The same staff training procedure will be used. However, a dedicated digital line between each jail and the Division office at the Hall of Justice will be installed which will permit data, audio, text, graphics and video information to be transmitted. Both administrative and educational information (including software and video) can be transmitted. This project is expected to be implemented in late 1989.

SPECIAL VIDEO PROJECTS

The Division also produces videos for other public sector agencies. Products include training, and informational tapes and public service announcements. A set of training videos for the County Probation Department is currently in production as is the ESL series. Clients include CASAS, the California Department of Education, the California Department of Forestry and Fire Protection, and the Los Angeles County Sheriff's Department.

The sale of videos to a broader market for the Division. These outside funds help fund the Media Services staff and equipment. Plans are in the works to expand these

entrepreneurial services to multimedia similar to the AIDS and Learning Styles products and the educational software.

Technology Funding

Resources to cover this broad range of activities are substantial. The funding sources for the Division include the following:

Exhibit 2
CORRECTIONS EDUCATION
FUND SOURCES

Fund Source	Amount	Technology Funding
JTPA 8%	$ 75,000	yes, specifically
JTPA 30%	400,000	no
Carl Perkins	82,000	yes
Corrections Ed[3]	1,500,000	yes
Governor's Line Item		yes
Inmate Welfare Fund	900,000	yes, digital link
video contracts	varies	yes, specifically
media sales	varies	yes, specifically
ABE	40,000	yes
Independent Study	2,000,000	yes

Over the seven years that an emphasis on instructional media has been in effect, the hardware and software have slowly built up, (1) the computers through regular budgets, (2) the video equipment through regular and special budgets, and lease-purchase arrangements, and (3) the administrative hardware/software through regular budgets. The on-going purchase of hardware and software is a budget line item, which is supplemented by the special contracts, competitive grants and entrepreneurial activities. The digital link to the jails will be financed by a special fund and tied into an administrative link that the Sheriff's Department will have to the jail stores.

Preparation for the Technology Uses

The whole thrust of this media group has been preparing and introducing instructional technology. The Division has been fortunate in having limited instructional and media staff turnover. This makes the development and introduction of new technology quite smooth. Instructional personnel, in interviews, made it very clear that the technologies enhance their abilities to serve inmates. They are not threatened by them because they participate in identifying the needs and the applications.

The structured interaction between instructional media and curricula is well worked out. Development steps are, at this point, based on this process:

Exhibit 3
CORRECTIONS EDUCATION
MEDIA DEVELOPMENT

DETERMINE STUDENT NEEDS FOR SUPPORTIVE MEDIA
▼
DEVELOP MEDIA STRATEGY
▼
COMPARE STRATEGY WITH CURRICULUM
▼
DEVELOP MEDIA
▼
TEST AND EVALUATE MEDIA
▼
REFINE MEDIA
▼
INTRODUCE MEDIA AS CURRICULUM RESOURCE

Strengths and Weaknesses of the Current Technologies

of technology which permits the instructor to select which technology to use. The Division has developed technology which supports instruction; it does not determine it. The Division's basic strength is the commitment of human, financial and technological resources to the enhancement of the curriculum.

The Division's next step will be the creation of a networked system of software, much of it from the Apple domain, which would permit the instructor to identify a needed program and request it from a fileserver. With a digital link to the central office, the future possibilities are enormous because there will be both decentralized (classrooms at each jail) and centralized (Division office) sources of ready-to-use software and multimedia instructional support material.

John Fleischman, by virtue of his national leadership in this field, clearly sees the trends and possibilities. His commitment to the Macintosh platform places him at odds with many other ABE and ESL providers. The MAC is not currently used by many ABE providers. While this machine's multimedia capabilities and ease of use are ideal for education, adult education software is currently nonexistent. As the second generation of multimedia technology is introduced, it must be produced locally, at least in the short run. This is expensive, though optimal, and few ABE and ESL programs can afford the luxury of such an approach. If the Division's current authoring software and new conversion possibilities between the MAC and MS DOS prove effective, then the Media Services Department can then produce powerful multilayered, multimedia software which other providers may want to purchase and adopt. If these conversions (porting) are unfeasible, the ability to recover multimedia production costs will be more limited and the potential Media Lab role that the Corrections Education Division envisions will be diminished to possibly serving the School District and those other adult schools who embrace the MAC.

Trends and Directions

The Corrections Education Division understands the utility of computer and multimedia learning stations to assist with the education of constantly coming and going inmates. The recent introductions of laser disk players, software linking video and computer based instruction are in keeping with the most trends in educational technology. Using video to heighten learning and communication is clearly demonstrated as I approached in the interviews.

The Division's vision is a digital link between all classrooms and a centralized resource which can provide software and video media to any site upon request. Many of these media packages could simply be requested and downloaded from the curriculum resource computer, probably using a compact disk storage device. Each networked jail site would have its own multimedia software database that instructors and users could utilize instantly.

This interconnection objective, which blurs the definitions of communication and information, is heady and exciting. It can be accomplished with current technology. Planning is actively underway.

Findings and Conclusions

If you want to see one vision of a possible future for the uses of educational technology for ABE and ESL, Hacienda La Puente Corrections Education is an important example. The decision to support an open system of instructional media and a variety of technologies to provide sufficient content for learning is attractive and thoughtful. Instructor's are not married to any one vendor's current offering.

The Media Services Department's role is supportive to the classroom instructor. Instructional media are not imposed, but rather developed in response to needs identified by the instructor. This approach involves the instructor in evaluating instructional media prior to their general dissemination.

The Hacienda La Puente Corrections Education Division's Media Services Division would like be seen as a Media Lab, and there is good reason to consider them exactly that. While the software authoring is still rudimentary, the Division is taking advantage of all instructional media, and stands alone as an ABE/ESL educational facility developing multimedia materials.

Source:
Micro Methods: Using Educational Technology to Overcome the Adult Basic Skills Gap: California's Experience and Prospects. Berkeley, [illegible] 1990.

Appendix H

Effective ABE Staff Development
A Self Study Guide

Staff training has always been an important component of Adult Basic and Secondary Education programs. Some $3 million is invested by States each year in Section 310 projects to improve staff competencies. Also, many local ABE programs expend local and State funds for a variety of training activities. Finding ways to make staff development more effective is a priority for ABE programs at all levels.

In 1986 the newly formed national ABE Staff Development Consortium developed a set of ***Principles and Techniques for Effective ABE Staff Development***, based on staff development research from both the Adult Education and K-12 communities. These "principles" were used to develop the content of this Self-Study Guide. The format of the guide was adapted from the ***Self-Study Assessment and Planning Guide*** developed by the Commission on Higher Education and the Adult Learner in 1984.

Staff trainers and State staff development coordinators may use this guide to assess, plan and better understand their staff development programs. The guide contains six General Principles addressing collaborative planning, institutional policy, conditions of training, training processes, individual learner needs, and evaluation.

The self-study components include a set of diagnostic questions relating to each principle, a section for planning the application of the principles, a section for assessing performance and a page for planning program improvement activities.

If you would like additional information or materials on improving ABE staff development, contact:

James T. Parker
Division of Adult Education
U. S. Department of Education
Washington, DC 20202-5515
(202) 732-2399

Source:
United States Department of Education
Division of Adult Education
Washington, D. C.
March 1987

SECTION I

GENERAL PRINCIPLE: All segments of those involved in the ABE program are involved in planning for staff development.

Please answer the following questions as they relate to the current status of this principle in your program.

1. Does your staff development program assess the perceived training needs of teachers, counselors, other staff?

   ___ Yes ___ No ___ Not applicable

2. Is the local ABE program director involved in inservice programs?

   ___ Yes ___ No ___ Not applicable

3. Have participants been involved in diagnosing, implementing and evaluating their own learning experiences?

   ___ Yes ___ No ___ Not applicable

4. Have ABE programs in your area collaborated in the planning and implementation of staff development?

   ___ Yes ___ No ___ Not applicable

5. (Add other relevant questions here)

   _____

   _____

   _____

   _____

ACTION TO BE TAKEN:

___ Do not plan to apply this principle (Note reason): _____

_____

___ Principle is not appropriate (Note reason): _____

_____

___ Principle is appropriate for our staff development program. (Move to Section II).

SECTION II

Plans for applying the principle of staff involvement.

ACTIONS PLANNED:

1. _____

_____

2. _____

_____

3. _____

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4. _____

_____

SECTION III

Performance Assessment: If this principle has been accepted as applicable to your ABE staff development program, how do you rate your performance to date in meeting the standard that the principle implies?

___ Training needs, as perceived by staff, have been assessed.

___ The local ABE director has been involved in training programs.

___ Participants have been involved in diagnosing, implementing and evaluating their learning experiences.

___ ABE programs have collaborated in providing staff development.

Rating: Considering the above-listed factors and others, as appropriate, rate performance related to this principle.

Outstanding Very Good Adequate Less Than Adequate Poor

1 2 3 4 5

Plans: If the performance rating for this principle is less than you want it to be, use the space below to state briefly your plans for improving performance in the future. Your notes should include: (1) recommendations for changes, if any, in policy or practice, (2) identification of formal and informal decision-making individuals and groups who would need to be involved in such change, and (3) a tentative timetable for implementation.

RECOMMENDATIONS FOR CHANGE: _____

DECISION-MAKERS TO BE INVOLVED: _____

TIMETABLE: _____

OTHER CONSIDERATIONS: _____

SECTION I

GENERAL PRINCIPLE: Institutional policies support effective ABE staff development activities.

Please answer the following questions as they relate to the current status of this principle in your program.

1. Is staff development an on-going process that encourages growth of continuing staff?

   ___ Yes ___ No ___ Not applicable

2. Does staff development encourage new staff to become an integral part of the ABE system and program development?

   ___ Yes ___ No ___ Not applicable

3. Is the staff development program closely related to State or local priorities?

   ___ Yes ___ No ___ Not applicable

4. Does your ABE program link training activities to a professional development plan (PDP) or a general program effort?

   ___ Yes ___ No ___ Not applicable

5. (Add other relevant questions here)

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_____

ACTION TO BE TAKEN:

___ Do not plan to apply this principle (Note reason): _____

_____

___ Principle is not appropriate (Note reason): _____

_____

___ Principle is appropriate for our staff development program. (Move to Section II).

SECTION II

Plans for applying the principle of institutional support.

ACTIONS PLANNED:

1. _____

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2. _____

_____

3. _____

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4. _____

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SECTION III

Performance Assessment: If this principle has been accepted as applicable to your ABE staff development program, how do you rate your performance to date in meeting the standard that the principle implies?

___ Staff development is being conducted as an on-going process.

___ New staff have been encouraged to become an integral part of the program.

___ Staff development has been related to State or local priorities.

___ Training activities are being linked to a PDP or other program effort.

Rating: Considering the above-listed factors and others, as appropriate, rate performance related to this principle.

Outstanding Very Good Adequate Less Than Adequate Poor

1 2 3 4 5

Plans: If the performance rating for this principle is less than you want it to be, use the space below to state briefly your plans for improving performance in the future. Your notes should include: (1) recommendations for changes, if any, in policy or practice, (2) identification of formal and informal decision-making individuals and groups who would need to be involved in such change, and (3) a tentative timetable for implementation.

RECOMMENDATIONS FOR CHANGE: _____

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DECISION-MAKERS TO BE INVOLVED: _____

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TIMETABLE: _____

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OTHER CONSIDERATIONS: _____

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SECTION I

GENERAL PRINCIPLE: Training conditions facilitate effective staff development activities.

Please answer the following questions as they relate to the current status of this principle in your program.

1. Are ABE teachers permitted to participate in staff development activities on "prime time" as part of their professional assignment?

___ Yes ___ No ___ Not applicable

2. Are training sessions held in comfortable surroundings away from class sites?

___ Yes ___ No ___ Not applicable

3. Does staff development provide positive incentives to participate, both during the activity and during its implementation?

___ Yes ___ No ___ Not applicable

4. Have opportunities been provided during training sessions for small-group discussions of the application of new practices and sharing of ideas about effective instruction?

___ Yes ___ No ___ Not applicable

5. Does the staff development allow teachers to experiment with new ideas when working in teams or with other group support?

___ Yes ___ No ___ Not applicable

6. Does your staff development program employ persons perceived as credible by the group in training?

___ Yes ___ No ___ Not applicable

7. Are teachers who have been trained as staff developers involved in staff training activities?

___ Yes ___ No ___ Not applicable

8. (Add other relevant questions here)

_____

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_____

ACTION TO BE TAKEN:

___ Do not plan to apply this principle (Note reason): _____

_____

___ Principle is not appropriate (Note reason): _____

_____

___ Principle is appropriate for our staff development program. (Move to Section II).

SECTION II

Plans for applying the principle of appropriate training conditions.

ACTIONS PLANNED:

1. _____

_____

2. _____

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3. _____

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4. _____

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SECTION III

Performance Assessment: If this principle has been accepted as applicable to your ABE staff development program, how do you rate your performance to date in meeting the standard that the principle implies?

___ Teachers have been permitted to participate on "prime time".

___ Training sessions have been held in comfortable, off-site locations.

___ The program is providing positive incentives to participants during training and implementation.

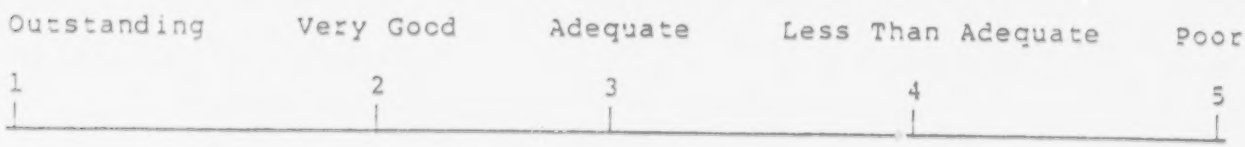
___ Opportunities have been provided for small-group discussions during training.

___ Team-work in trying new ideas has been facilitated by the staff development program participants.

___ Staff trainers are perceived as credible by participants.

___ Teachers have been trained as staff developers, and are being employed in that capacity.

Rating: Considering the above-listed factors and others, as appropriate, rate performance related to this principle.



Plans: If the performance rating for this principle is less than you want it to be, use the space below to state briefly your plans for improving performance in the future. Your notes should include: (1) recommendations for changes, if any, in policy or practice, (2) identification of formal and informal decision-making individuals and groups who would need to be involved in such change, and (3) a tentative timetable for implementation.

RECOMMENDATIONS FOR CHANGE: _____

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DECISION-MAKERS TO BE INVOLVED: _____

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TIMETABLE: _____

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OTHER CONSIDERATIONS: _____

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SECTION I

GENERAL PRINCIPLE: Staff development provides sufficient time and opportunity for participants to learn, practice, master and apply the training content.

Please answer the following questions as they relate to the current status of this principle in your program.

1. Does your ABE staff development allow for intervals in which to plan and try out new approaches and return to evaluate their successes and problems?

   ___ Yes ___ No ___ Not applicable

2. Has time for experimentation been provided while teachers adapt new practices to meet the needs of their students?

   ___ Yes ___ No ___ Not applicable

3. Is personal, in-classroom assistance from administrators and fellow teachers available while practices are being implemented?

   ___ Yes ___ No ___ Not applicable

4. Are teachers given the opportunity to periodically meet and share ideas with colleagues?

   ___ Yes ___ No ___ Not applicable

5. Have inservice programs been planned to accomodate both short and long range staff needs?

   ___ Yes ___ No ___ Not applicable

6. Is there a plan or set of instructional materials ready for use when participants leave training activities?

   ___ Yes ___ No ___ Not applicable

7. (Add other relevant questions here)

_____

_____

_____

_____

ACTION TO BE TAKEN:

___ Do not plan to apply this principle (Note reason): _____

_____

___ Principle is not appropriate (Note reason): _____

_____

___ Principle is appropriate for our staff development program. (Move to Section II).

SECTION II

Plans for applying the principle of time and opportunity.

ACTIONS PLANNED:

1. _____

_____

2. _____

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3. _____

_____

4. _____

_____

SECTION III

Performance Assessment: If this principle has been accepted as applicable to your ABE staff development program, how do you rate your performance to date in meeting the standard that the principle implies?

___ Staff development has allowed for intervals in which to plan, try out and evaluate new approaches.

___ Time for experimentation has been provided.

___ Assistance in implementation of new practices has been available from administrators and fellow teachers.

___ Teachers have been given opportunities to meet and share ideas.

___ Inservice programs have been planned to meet short and long term needs.

___ Ready-to-use materials or plans have been developed.

Rating: Considering the above-listed factors and others, as appropriate, rate performance related to this principle.

Outstanding	Very Good	Adequate	Less Than Adequate	Poor
1	2	3	4	5

Plans: If the performance rating for this principle is less than you want it to be, use the space below to state briefly your plans for improving performance in the future. Your notes should include: (1) recommendations for changes, if any, in policy or practice, (2) identification of formal and informal decision-making individuals and groups who would need to be involved in such change, and (3) a tentative timetable for implementation.

RECOMMENDATIONS FOR CHANGE: _____

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DECISION-MAKERS TO BE INVOLVED: _____

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TIMETABLE: _____

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OTHER CONSIDERATIONS: _____

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SECTION I

GENERAL PRINCIPLE: The staff development program recognizes individual learner needs and provides experiences to address these needs.

Please answer the following questions as they relate to the current status of this principle in your program.

1. Do training activities permit variation in the ways the learners participate, and in ways they use what they learn?

   ___ Yes ___ No ___ Not applicable

2. Does your staff development program provide different educational experiences for participants at different stages of development?

   ___ Yes ___ No ___ Not applicable

3. Are participants' concerns listened to, and appropriate program adjustments made?

   ___ Yes ___ No ___ Not applicable

4. Have ABE teachers been provided materials to read and study on their own?

   ___ Yes ___ No ___ Not applicable

5. (Add other relevant questions here)

   _____

   _____

   _____

   _____

ACTION TO BE TAKEN:

___ Do not plan to apply this principle (Note reason): _____

_____

___ Principle is not appropriate (Note reason): _____

_____

___ Principle is appropriate for our staff development program. (Move to Section II).

SECTION II

Plans for applying the principle of individual learner needs.

ACTIONS PLANNED:

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

SECTION III

Performance Assessment: If this principle has been accepted as applicable to your ABE staff development program, how do you rate your performance to date in meeting the standard that the principle implies?

___ Activities have permitted variation in learner participation and use of learning.

___ Different educational experiences have been provided for participants at different stages of development.

___ Participants' concerns have been recognized, and training program adjustments made.

___ Materials have been provided for independent study.

Rating: Considering the above-listed factors and others, as appropriate, rate performance related to this principle.

Outstanding Very Good Adequate Less Than Adequate Poor

1 2 3 4 5

Plans: If the performance rating for this principle is less than you want it to be, use the space below to state briefly your plans for improving performance in the future. Your notes should include: (1) recommendations for changes, if any, in policy or practice, (2) identification of formal and informal decision-making individuals and groups who would need to be involved in such change, and (3) a tentative timetable for implementation.

RECOMMENDATIONS FOR CHANGE: _____

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DECISION-MAKERS TO BE INVOLVED: _____

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TIMETABLE: _____

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OTHER CONSIDERATIONS: _____

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SECTION I

GENERAL PRINCIPLE: Evaluation is an integral component of ABE staff development.

Please answer the following questions as they relate to the current status of this principle in your program.

1. Does your staff development process provide continuous feedback on the effectiveness of training?

   ___ Yes ___ No ___ Not applicable

2. Has the process employed a variety of evaluation techniques?

   ___ Yes ___ No ___ Not applicable

3. Do evaluation results influence future planning and implementation of staff development activities?

   ___ Yes ___ No ___ Not applicable

4. (Add other relevant questions here)

   _____

   _____

   _____

   _____

ACTION TO BE TAKEN:

___ Do not plan to apply this principle (Note reason): _____

_____

___ Principle is not appropriate (Note reason): _____

_____

___ Principle is appropriate for our staff development program. (Move to Section II).

SECTION II

Plans for applying the principle of program evaluation

ACTIONS PLANNED:

1. _____

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2. _____

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3. _____

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4. _____

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SECTION III

Performance Assessment: If this principle has been accepted as applicable to your ABE staff development program, how do you rate your performance to date in meeting the standard that the principle implies?

___ Our staff development process has provided continuous feedback on training effectiveness.

___ A variety of evaluation techniques have been used.

___ Evaluation results have been used to influence the planning and implementation of staff development activities.

Rating: Considering the above-listed factors and others, as appropriate, rate performance related to this principle.

Outstanding		Very Good		Adequate		Less Than Adequate		Poor
1		2		3		4		5

Plans: If the performance rating for this principle is less than you want it to be, use the space below to state briefly your plans for improving performance in the future. Your notes should include: (1) recommendations for changes, if any, in policy or practice, (2) identification of formal and informal decision-making individuals and groups who would need to be involved in such change, and (3) a tentative timetable for implementation.

RECOMMENDATIONS FOR CHANGE: _____

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DECISION-MAKERS TO BE INVOLVED: _____

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TIMETABLE: _____

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OTHER CONSIDERATIONS: _____

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Appendix I

California Adult Education Special Projects

These special projects were and are financed with federal funds from the *Adult Education Act, P. L. 100-297* (formerly *P.L. 91-230*), as amended. Special projects have been referred to as *Section 309, 310,* or *353* projects, referring to the section of the law that provides the funding.

1975–1976

Development of a Bilingual Living Skills Curriculum
Montal Educational Associates

Process of Educating Adults in Reading-Language
Far West Laboratory

Survival English
Fairfield-Suisun Unified School District

1975–1977

Adult Competency Education (ACE)
San Mateo County Office of Education

Volunteer Adult Basic Reading Tutorial Program
Literacy Volunteers of America, Incorporated

Watts ABE Outreach Program
Los Angeles Unified School District

1975–1978

Adult Basic Education Comprehensive Institute
San Diego State University

Teacher Training Project in Adult Basic Education
California State University, Fullerton

1976–1977

Reading Vocabulary in Action: A Basic Writing Program
Los Angeles Unified School District

Student Centered Analysis of Need (SCAN)
Elsinore Union High School District

1976–1978

Community Organization to Optimize Learning (COOL)
Elsinore Union High School District

Video Tape Bank—ESL/ABE Classroom Strategies
Palomar College

A Special Experimental Demonstration Project: An Educational Training Program for Filipino-Americans
Phillippine-American Cultural and Educational Society of Sacramento (PACESS)

Special Experimental Demonstration and Teacher Training—Needs Assessment Model
Spanish Speaking Unity Council

1976–1980

California Adult Competency Education (CACE)
San Francisco State University

A Model ABE/ESL Information Collection and Dissemination System to Implement an Adult Performance Level Program (ICDS)
San Diego Community College District

1976-1981

A Functional Competency Based Curriculum for Adult Basic Education/Competency Based Live-Ability Skills (CLASS)
Clovis Unified School District

1977–1978

Competency Based/APL Staff Training Project
Northwest Regional Educational Laboratory

Urban Test Site for COOL
Riverside Unified School District

1977–1979

APL Game Plan
Elsinore Union High School District

Community Education ABE/ESL Recruiting Project
Vista Unified School District, Santa Maria Unified School District and Bassett Unified School District

1977–1980

Integrated Competency Based Bilingual Vocational ESL
Chinatown Resources Development Center

1977–1981

Adult Education Staff Development
ACSA, CCAE and CABEL

Competency Based Adult Diploma Project
Los Angeles Unified School District

1978–1979

Diagnostic/Prescriptive Strategies for Students With Learning Disabilities
Berkeley Unified School District

Teaching Reading In-service Program (TRIP)
Fremont Union School District

Recruiting and Retaining Low-Literate ABE/ESL Students Through Outreach and Peer Tutoring
San Diego Community College District

1978–1980

Special Experimental Demonstration Tutored Videotape Instruction for Adult Basic Education
College of the Desert

Funny Bone Family Saga
Elsinore Union High School District

1978–1981

Needs Assessment of Adult Basic Competencies in California
NOMOS Institute

1979–1980

A Vocational Education Approach to English as a Second Language
Ceres Adult School

The Missing Link
Elsinore Union High School District

CALCOMP Projects
Clovis Adult School, Hacienda La Puente Unified School District, Los Angeles Unified School District, Montebello Adult School, Salinas Adult School, San Diego Community College and San Francisco Community College

1979–1981

Diagnostic Reading Test for ESL Students
Fremont Union High School District

Techniques for Effective Language Learning (TELL)
Grossmont Union High School District

1979–1981 (Continued)

Innovative Application of Samoan Culture to Adult Education Approach
Office of Samoan Affairs

1980–1981

La Familia: A Family Education/Interagency Project for Rural and Limited English Speaking Families in California
Butte County Schools Office

Vocational ESL Staff Development Project
Chinatown Resources Development Center, Inc.

ESL Outreach Program for Unemployed and Underemployed Adults: A Partnership With Industry
Fremont Union High School District

1980–1982

Telecentered Learning Experiences (TELex)
Elsinore Union High School District

ESL Staff Development/ABE-ESL Staff Development
Association of California School Administrators

1980–Current

California Adult Student Assessment System (CASAS)
CALCOMP project sites listed above plus the following were the original consortium districts: Alhambra Adult School, Burbank Adult School, Pajaro Valley Unified School District, San Jose Unified School District and Vallejo City Unified. Consortium membership grew to approximately 40 agencies.

1981–1982

Cultural Awareness Training Project
Chinatown Resources Development Center, Inc.

1981–1988

Dissemination Network for Adult Educators (DNAE)
Association of California School Administrators (ACSA)

1982-1988

Competency Based Adult Education Staff Development
San Francisco State University

1985–Current

ESL Teacher Institute
Association of California School Administrators

Adult Education Leadership Training Programs
California Council for Adult Education

1988–1989

CBAE Regional Demonstration Sites
Hacienda La Puente Adult Education

CURRENT PROJECTS FUNDED THROUGH 1990–1991

ABE Teacher Institute
Los Angeles Adult and Occupational Education

Adult Education Institute for Research and Planning (AEI)
Pacific Management and Research Associates

Comprehensive Adult Student Assessment System (CASAS)
San Diego Community College District Foundation, Inc.

ESL Teacher Institute
Association of California School Administrators

Evaluation of Four-Year Plan
Evaluation and Training Institute

Executive Development Program
Association of California School Administrators

Leadership Training Programs
California Council for Adult Education

Outreach and Technical Assistance Network
Hacienda La Puente Adult Education

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